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MARKETING and TRANSPORTATION SITUATION



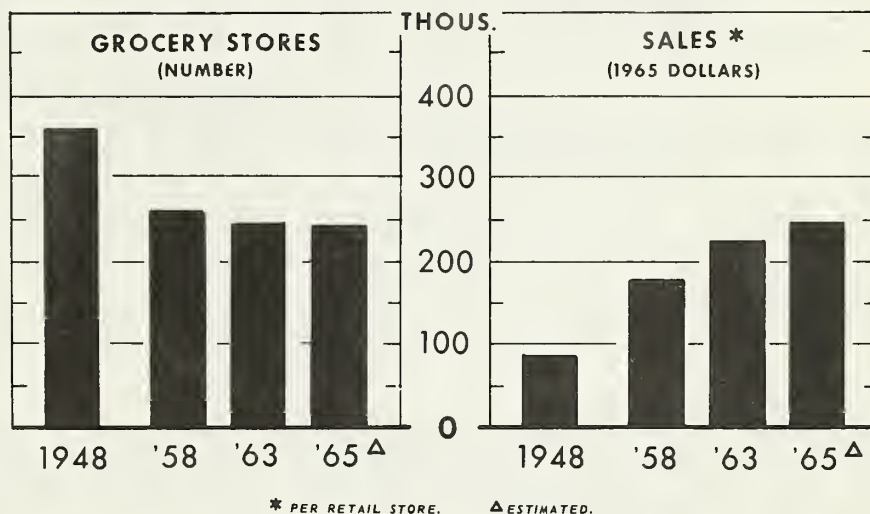
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MAY 1966

Average sales per grocery store, adjusted for price level changes, in 1965 were nearly 3 times those in 1948. This growth resulted from growth in total grocery store sales, and from the opening of many large supermarkets and the closing of a larger number of smaller stores. The number of grocery stores decreased by a third although their total sales (adjusted for price changes) nearly doubled. Also, the proportion of grocery stores operated by multi-store firms increased. Among the attractions to customers offered by the new supermarkets were larger stocks than those carried by smaller stores, more attractive appearance, and parking lots. Supermarkets benefited from movements of population into new areas and from increased shopping by auto.

NUMBER OF STORES DECLINES, SALES PER STORE INCREASE



U. S. DEPARTMENT OF AGRICULTURE

NEG. ERS 4491-66 (4) ECONOMIC RESEARCH SERVICE

IN THIS ISSUE

- The Food Marketing Industries--
Recent and Prospective Structural Changes

U. S. DEPT. OF AGRICULTURE
ECONOMIC RESEARCH SERVICE

FEB 13 1969

CONTENT CONTAINED

STATISTICAL SUMMARY OF MARKET INFORMATION

Item	Unit or base period	1965				1966
		Year	Jan.-Mar.	July-Sept.	Oct.-Dec.	Jan.-Mar.
<u>Farm-to-retail price spreads</u>						
Farm-food market basket: 1/						
Retail cost	Dol.	1,042	1,015	1,060	1,052	1,090
Farm value	Dol.	409	384	419	424	451
Farm-retail spread	Dol.	633	631	641	628	639
Farmer's share of retail cost	Pct.	39	38	40	40	41
Cotton: 2/						
Retail cost	Dol.	2.17	2.16	2.17	2.19	2.19
Farm value	Dol.	.30	.30	.29	.29	.29
Farm-retail spread 3/	Dol.	1.87	1.86	1.88	1.90	1.90
Farmer's share of retail cost	Pct.	14	14	13	13	13
Cigarettes: 4/						
Retail cost	Ct.	29.9	---	---	---	---
Farm value	Ct.	3.85	---	---	---	---
Federal and State excise taxes	Ct.	13.0	---	---	---	---
Farm-retail spread excluding excise taxes	Ct.	13.1	---	---	---	---
Farmer's share of retail cost	Pct.	13	---	---	---	---
<u>General economic indicators</u>						
Consumers' per capita income and expenditures: 5/						
Disposable personal income	Dol.	2,391	2,330	2,418	2,456	2,492
Expenditures for goods and services	Dol.	2,203	2,152	2,219	2,255	2,308
Expenditures for food	Dol.	436	423	441	449	463
Expenditures for food as percentage of disposable income	Pct.	18.2	18.2	18.2	18.3	18.6
		1965		1966		
		Year	Mar.	Jan.	Feb.	Mar.
Hourly earnings, production workers, manufacturing: 6/						
Hourly earnings of food marketing employees 7/	Dol.	2.30	2.29	2.35	2.36	---
Retail sales: 8/						
Food stores	Mil. dol.	5,577	5,381	5,783	5,922	---
Apparel stores	Mil. dol.	1,313	1,245	1,417	1,461	---
Manufacturers' inventories: 8/						
Food and kindred products	Mil. dol.	6,034	6,196	6,243	6,230	6,342
Textile mill products	Mil. dol.	3,130	2,820	3,119	3,169	3,199
Tobacco products	Mil. dol.	2,371	2,328	2,334	2,338	2,399
Indexes of industrial production: 9/						
Food and beverage manufactures	1957-59=100	123.3	123.4	126.0	126.4	---
Textile mill products	1957-59=100	134.8	131.5	140.4	140.7	---
Apparel products	1957-59=100	145.0	144.0	143.1	---	---
Tobacco products	1957-59=100	120.5	127.2	119.6	---	---
Index of physical volume of farm marketings	1957-59=100	118	88	131	89	93
<u>Price indexes</u>						
Consumer price index 6/	1957-59=100	109.9	109.0	111.0	111.6	112.0
Wholesale prices of food 10/	1957-59=100	104.5	101.8	108.9	110.8	111.1
Wholesale prices of cotton products 6/	1957-59=100	100.2	99.6	101.0	101.3	101.8
Wholesale prices of woolen products 6/	1957-59=100	104.3	103.1	105.9	105.8	106.0
Prices received by farmers 11/	1957-59=100	102	99	109	113	112
Prices paid by farmers, interest, taxes, and wage rates 11/	1957-59=100	110	109	112	112	113

1/ Contains average quantities of farm-originated foods purchased annually per household in 1960-61 by wage-earner and clerical-worker families and single workers living alone. Estimates of the farmer's share do not allow for direct Federal payments to producers, except for the value of wheat marketing certificates. 2/ Data for average family purchases in 1950 of 25 articles of cotton clothing and housefurnishings divided by number of pounds of lint cotton required for their manufacture; see U.S. Dept. Agr. Mktg. Res. Rpt. 277. 3/ Farm-retail spread does not include Federal payments made through issuance of payment-in-kind certificates to domestic users of eligible U.S. raw upland cotton. This payment amounted to 6.5 cents per pound of raw cotton from April 1964, through July 1965, and 5.75 cents beginning in August, 1965. 4/ Data for package of regular-sized popular brand cigarettes; farm value is return to farmer for 0.065 lb. of leaf tobacco of cigarette-types; data for year ended June 30, 1965. 5/ Seasonally adjusted annual rate, calculated from Dept. of Commerce data. 6/ Dept. Labor. 7/ Weighted composite earnings in food processing, wholesale trade, retail food stores, calculated from data of Dept. Labor. 8/ Seasonally adjusted, Dept. Commerce. Sales data for 1965 are averages of monthly totals (unadjusted). Inventory data for 1965 are book values at end of year (adjusted). 9/ Seasonally adjusted, Board of Governors of Federal Reserve System. 10/ Fresh and dried fruits and vegetables, eggs, and processed foods; Dept. Labor. 11/ Converted from 1910-14 base.

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The retail cost of market basket foods in the first quarter averaged almost 4 percent higher than in the previous quarter and 7 percent above a year earlier. Meat products, poultry and eggs and fresh vegetables accounted for most of the increase from the fourth quarter. However, retail costs rose for all major product groups.

Farmers received an average of 41 cents of each dollar consumers spent for farm food products in the first quarter this year, 1 cent more than in the previous quarter and 3 cents more than a year ago.

Total net income of leading companies that process and distribute farm food products was larger in 1965 than in 1964. Net income as a percentage of sales was higher for 3 out of 5 industry groups, but was down sharply for the meatpacking firms. Net income as a percentage of net assets varied in about the same pattern as the net income-to-sales ratio.

Net incomes of leading firms processing nonfood farm products also totaled higher in 1965 than in 1964. Net income as a percentage of sales increased in 3 out of 5 industry groups. As a percent of net assets, it increased 4 out of the 5.

Highlights of Special Articles

The Food Marketing Industries--Recent and Prospective Structural Changes, p. 14.--

A trend to fewer but larger establishments in the food marketing industries has been developing since the early postwar years. It has been most conspicuous in retailing and has operated in food processing and wholesaling and in the assembly of farm products. Technological developments, opportunities for economies of scale, and many other changes had a part in perpetuating this trend. Technology has had a major part in improving efficiency and has altered the competitive structure of markets for farm and food products.

An exception to this trend to fewer but larger establishments is the meatpacking industry. The largest meatpacking firms now account for a smaller proportion of total slaughter than in earlier years. The number of livestock slaughter firms has increased, and slaughter plants located in livestock-producing areas now account for an increasing proportion of the total slaughter. On the supply side of the livestock market, the trend is toward a smaller number of producers of larger average size. This is particularly apparent in commercial cattle feeding where new regions are experiencing rapid growth in cattle finishing. These and other developments in livestock supply and demand and in marketing agencies have generated shifts in livestock marketing. Rapid increase in direct selling is an example of these shifts.

Today there are fewer than half as many fluid milk bottling plants in this country as in 1948. The number of plants manufacturing dairy products also has declined. Technological developments were mainly responsible. Eight large dairy products companies have a major part of the market for all types of dairy products. In another 10 years, most fluid milk processors will have transferred the entire milk supply function to producer cooperatives, including management and disposal of surplus fluid-grade milk.

Larger assembly plants are handling an increasing share of the egg production. Plants producing frozen eggs under Federal inspection and grading programs decreased in number from 1960 to 1965, but those producing dried eggs increased. Plants slaughtering and eviscerating poultry under Federal inspection and grading programs account for nearly 90 percent of the poultry sold off farms. The number of these plants has decreased, although total output has increased substantially. Economies of scale accounted for much of the decrease in number. Increasing density of production of poultry and eggs around local plants also was a factor. Production and marketing functions have been coordinated by many firms and further developments in this direction are expected.

Decreases also have occurred in the number of establishments marketing grain and processing grain products. Slow growth in domestic consumption of grain products

during the 1940s and 1950s partly accounted for these decreases. However, this downward trend in establishment numbers apparently has been reversed. Output per establishment has increased and further increases are likely.

The number of plants canning fruits and vegetables decreased by one-third from 1947 to 1963, and plants packing pickles and sauces decreased by a fifth. However, plants in the frozen fruits and vegetables industry more than doubled. Output increased more relatively in this industry than in other fruit and vegetable processing industries. Processed products make up an increasing part of fruit and vegetable consumption. Further increases are expected. The number of establishments assembling fresh fruits and vegetables has changed little since 1948, and the number of establishments operated by merchant wholesalers of these products has declined. However, establishments of agents and brokers selling fresh fruits and vegetables have increased in number. Food chains and affiliated wholesalers buy more of their supplies of fresh fruits and vegetables at shipping points instead of in city wholesale markets.

The number of plants processing soybeans and cottonseed has decreased, and average output per plant has increased. The adoption of more efficient oil extraction methods partly accounted for these changes. Also fewer plants are manufacturing consumer products from vegetable oils although output has increased. The trend to fewer and larger plants is expected to continue in these industries.

The growth--both in number and sales--of merchant wholesaler establishments affiliated with retail food stores has been the outstanding postwar development in the wholesale grocery trade. Sales and number of nonaffiliated establishments have declined. Sales of specialty line establishments and of agents and brokers in the grocery wholesale trade have increased. Sales of manufacturers' branch houses and offices also increased.

The number of grocery stores in this country declined by about a third from 1948 to 1963. Most of the decrease was in small stores and in those operated by single-unit firms. Average sales per store more than tripled. In 1963 stores having annual sales of a million dollars or more accounted for 53 percent of total grocery stores sales, although they made up only 7 percent of the total number of establishments.

Firms operating more than 1 grocery store increased in number. The largest percentage increase was in firms operating 51 or more stores. These firms, however, represented less than 2 percent of the total number of multi-unit retail grocery firms although they accounted for about 40 percent of the total grocery store sales.

According to trade sources, retail grocery stores affiliated with wholesale grocery firms increased their share of grocery store sales to 49 percent in 1965 from 36 percent in 1954. Sales per store have grown rapidly. Most of these stores are operated by firms having fewer than 11 stores.

"Convenience" stores providing quick service from early in the morning until late at night and drive-in parking are a new and fast growing entry in the retail food trade. Most are operated by firms having 10 or more stores.

The number of small single-unit grocery stores has declined and probably will continue to decline, mainly because of their small sales volume. However, affiliation with a wholesaler may enable many single-unit supermarkets to compete successfully.

Consumers are spending more of their food dollar in eating places. In recent years sales by eating places have been growing more than 50 percent faster than those of grocery stores. In this field, also, the number of small establishments has declined. Sales by eating places are expected to grow faster than those by retail food stores.

FARM-RETAIL SPREADS FOR FARM-FOOD PRODUCTS

Food Marketing Spreads Increase

Farm-retail spreads for marketing farm-food products rose sharply in the first quarter of this year, mainly because of increases for pork, some fresh vegetables, and most processed fruits and vegetables. The spread between the total retail cost and farm value of the "market basket" of farm-originated food products averaged \$639 (annual rate) in January-March this year, up 2 percent from the previous quarter. ^{1/}

The first quarter average spread was about 1 percent above January-March 1965 (table 2). For pork, it was much wider than a year earlier, while the spread for Choice beef was narrower (table 21, p. 55). Other increases particularly significant were for frying chickens, fats and oils products, and most processed fruits and vegetables except frozen orange juice concentrate and frozen peas.

Farm Value Levels Off

The total farm value of the products in the farm-food market basket leveled off at an average of \$451 (annual rate) in the first quarter this year, 7 percent above the previous quarter. Higher prices received by farmers for animal products accounted for more than three-fourths of the rise (table 20, p. 54). However, farm values for all other major product groups also rose.

The farm value for the market basket in the first quarter averaged 18 percent higher than a year earlier. Although meat products accounted for most of the increase, most other major groups also increased. Farmers received less for fruits and vegetables in the first quarter than a year earlier mainly because of lower prices for fresh oranges, onions, potatoes, oranges for concentrating, and potatoes for French fries. Farm values of most fats and oils products also were down.

The first quarter market basket farm value was the highest quarterly average since 1952. In 3 of the 4 quarters that year, the farm value was higher than in the first quarter this year. However, retail cost in the quarter just ended was higher than in 1952 and the farm-retail spread was wider than in the earlier year.

Retail Cost up 4 Percent

The retail cost of the market basket of farm foods averaged \$1,090 (annual rate) in the first quarter of this year, up 4 percent from the previous quarter. This was the largest quarter-to-quarter increase since a similar rise in the first quarter of 1958. The greatest rise since World War II was a 6 percent increase in first quarter 1951 from the previous quarter. Retail costs rose in the first quarter of 1966 for all major product groups. Increases were largest for meat products, poultry and eggs, and fruits and vegetables.

^{1/} The "market basket" contains the average quantities of domestic farm-originated food products purchased annually per household in 1960-61 by wage earner and clerical-workers families and single workers living alone. Since the market basket does not contain imported foods or fishery products and other foods of nonfarm origin or the cost of meals in eating places, its retail cost is less than the cost of all foods bought per family. The farm value is the return to farmers for the farm products equivalent to the foods in the market basket. The farm-retail spread is the difference between the retail cost and farm value. It is an estimate of gross revenues received by marketing firms for assembling, processing, transporting, and distributing the products in the market basket.

Table 1.--The farm food market basket: Retail cost, farm value, farm-retail spread, and farmer's share of retail cost, 1954-66 1/

Year and month	Retail cost	Farm value <u>2/</u>	Farm-retail spread	Farmer's share
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Percent</u>
1954	933	398	535	43
1955	917	373	544	41
1956	920	369	551	40
1957	953	380	573	40
1958	1,009	407	602	40
1959	985	377	608	38
1957-59 average ..	983	388	595	39
1960	991	383	608	39
1961	997	380	617	38
1962	1,006	384	622	38
1963	1,013	374	639	37
1964	1,014	374	640	37
1965 <u>3/</u>	1,042	409	633	39
1965:				
January	1,015	382	633	38
February	1,013	384	629	38
March	1,015	386	629	38
April	1,022	396	626	39
May	1,030	413	617	40
June	1,063	426	637	40
July	1,072	424	648	40
August	1,059	420	639	40
September	1,050	414	636	39
October	1,047	416	631	40
November	1,047	415	632	40
December	1,061	440	621	41
1966:				
January	1,073	444	629	41
February	1,095	458	637	42
March	1,103	452	651	41

1/ Retail cost of average quantities purchased annually per household in 1960-61 by urban wage-earner and clerical-worker families and single workers living alone, calculated from retail prices collected by the Bureau of Labor Statistics. Monthly data are annual rates.

2/ Payments to farmers for equivalent quantities of farm products minus imputed value of byproducts obtained in processing.

3/ Preliminary.

Table 2.--The market basket of farm foods: Retail cost, farm value, farm-retail spread, and farmer's share of retail cost, January-March 1966 and January-March 1965

Item	Jan.-Mar. 1966	Jan.-Mar. 1965	Change: Jan.-Mar. 1966 from Jan.-Mar. 1965	
			Actual	Percentage
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Percent</u>
<u>Retail cost</u>				
Market basket	1,090.50	1,014.65	75.85	7
Meat products	338.92	282.32	56.60	20
Dairy products	182.52	179.45	3.07	2
Poultry and eggs	94.23	81.80	12.43	15
Bakery and cereal products :	163.41	161.01	2.40	1
All fruits and vegetables :	226.39	226.80	-.41	1/
Fats and oils	37.96	37.08	.88	2
Miscellaneous products:	47.07	46.19	.88	2
<u>Farm value</u>				
Market basket	451.38	383.98	67.40	18
Meat products	194.26	139.99	54.27	39
Dairy products	84.74	79.49	5.25	7
Poultry and eggs	56.88	45.63	11.25	25
Bakery and cereal products :	34.39	33.17	1.22	4
All fruits and vegetables :	60.64	64.64	-4.00	-6
Fats and oils	11.84	12.73	-.89	-7
Miscellaneous products:	8.63	8.33	.30	4
<u>Farm-retail spread</u>				
Market basket	639.12	630.67	8.45	1
Meat products	144.66	142.33	2.33	2
Dairy products	97.78	99.96	-2.18	-2
Poultry and eggs	37.35	36.17	1.18	3
Bakery and cereal products :	129.02	127.84	1.18	1
All fruits and vegetables :	165.75	162.16	3.59	2
Fats and oils	26.12	24.35	1.77	7
Miscellaneous products:	38.44	37.86	.58	2
<u>Farmer's share of retail cost</u>				
	<u>Percent</u>	<u>Percent</u>	<u>Percentage points</u>	
Market basket	41	38	3	
Meat products	57	50	7	
Dairy products	46	44	2	
Poultry and eggs	60	56	4	
Bakery and cereal products :	21	21	0	
All fruits and vegetables :	27	29	-2	
Fats and oils	31	34	-3	
Miscellaneous products:	18	18	0	

1/ Less than 0.5 percent.

Retail cost of the market basket averaged 7 percent higher in the first quarter this year than a year earlier. Again meat products and poultry and eggs accounted for most of the increase.

Farmer's Share Averages 41 Cents

Farmers received an average of 41 cents of each dollar consumers spent for domestic farm foods in retail food stores in the first quarter this year, compared with 40 cents in the preceding quarter and 38 cents in January-March 1965. During the preceding 10 years, the quarterly farmer's share averaged as much as 41 cents in 2 quarters in 1956 and in 1 quarter in 1957. However, it averaged as little as 36 cents in 1 quarter in both 1963 and 1964.

Marketing Spreads Increase for Pork But Decline for Beef

The farm value of pork averaged 46.2 cents in the first quarter this year, up 2.7 cents from the previous quarter and 17.9 cents from a year earlier (table 3). Retail prices for pork averaged 78.1 cents per pound, up 7.4 cents from the previous quarter and 21.3 cents higher than in the first quarter last year. Since the increase in the retail price was greater than the increase in the farm value, the farm-retail spread increased to a near record 31.9 cents in the first quarter, 4.7 cents more than in the previous quarter and 3.4 cents more than a year earlier. Both the wholesale-retail and farm-wholesale segments of the farm-retail spread increased from the fourth quarter and from January-March last year. However, most of the increase took place in the wholesale-retail segment. Prices received by farmers for hogs began to rise in the second quarter last year and rose to a high in January and February, but have since declined. Commercial slaughter of hogs in January-March this year was 11 percent below the same period of 1965.

The farm value of Choice beef averaged 51.5 cents in the first quarter, up 4.3 cents from the previous quarter and 7.9 cents from a year earlier. Marketings of beef cattle were up 6 percent from the first quarter of 1965.

The rapidly rising farm value for Choice beef was not completely reflected at the retail level during much of 1965; therefore, the farm-retail spread in the first quarter was lower than in the previous quarter and a year earlier. Both wholesale-retail and farm-wholesale spreads were down from both the previous quarter and a year earlier. Retail prices of Choice beef averaged 84.6 cents per pound in the first quarter this year, 1.7 cents above the previous quarter and 6.0 cents above a year earlier.

Farm Value, Retail Price, and Spread Higher for Frying Chickens

The retail price of frying chickens continued to increase in the first quarter this year mainly in response to short supplies of red meat and a strong consumer demand. The retail price averaged 41.8 cents per pound in the first quarter, up 3.3 cents from the previous quarter. The farm value averaged 22.8 cents, up 2.8 cents from the previous quarter. The rise in farm value was not as great as the rise in retail price; as a result, the farm-retail spread widened 0.5 cent. Reflecting strong demand conditions, the retail price, farm value, and spread were much higher in the first quarter this year than a year ago despite an 8 percent increase in the volume of frying chickens slaughtered.

Farm Value for Dairy Products Increases 3 Percent

Farmers received an average of 3 percent more for milk in the first quarter this year than in the previous quarter and about 7 percent more than a year earlier. Prices

Table 3.--Beef, pork, and lamb: Retail price, wholesale value, farm value, farm-retail spread, and farmer's share of retail price, annual 1963-65, by quarters, 1965-66

Date	Retail price	Wholesale	Gross	Byproduct	Net	Farm-retail spread			Farmer's
	per pound 1/	value 2/	farm value 3/	allowance 4/	farm value 5/	Total	Wholesale- retail	Farm- wholesale	
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent
Beef, (Choice grade)									
1963	81.0	56.1	51.1	4.5	46.6	34.4	24.9	9.5	58
1964	77.8	53.8	46.6	4.2	42.4	35.4	24.0	11.4	54
1965 6/	81.7	57.8	51.8	4.9	46.9	34.8	23.9	10.9	57
1965 6/									
Jan.-Mar.	78.6	54.4	47.9	4.3	43.6	35.0	24.2	10.8	55
Apr.-June	80.5	59.3	53.0	4.9	48.1	32.4	21.2	11.2	60
July-Sept.	84.2	59.9	53.9	5.4	48.5	35.7	24.3	11.4	58
Oct.-Dec.	82.9	57.6	52.5	5.3	47.2	35.7	25.3	10.4	57
1966 6/									
Jan.-Mar.	84.6	61.0	57.5	6.0	51.5	33.1	23.6	9.5	61
Apr.-June									
July-Sept.									
Oct.-Dec.									
Pork									
1963	57.3	40.3	31.0	3.9	27.1	30.2	17.0	13.2	47
1964	56.4	40.0	30.7	4.0	26.7	29.7	16.4	13.3	47
1965 6/	64.3	49.7	42.6	5.5	37.1	27.2	14.6	12.6	58
1965 6/									
Jan.-Mar.	56.8	41.1	32.8	4.5	28.3	28.5	15.7	12.8	50
Apr.-June	59.7	46.9	40.4	5.2	35.2	24.5	12.8	11.7	59
July-Sept.	69.7	54.2	47.3	6.0	41.3	28.4	15.5	12.9	59
Oct.-Dec.	70.7	56.5	49.9	6.4	43.5	27.2	14.2	13.0	62
1966 6/									
Jan.-Mar.	78.1	59.9	53.3	7.1	46.2	31.9	18.2	13.7	59
Apr.-June									
July-Sept.									
Oct.-Dec.									
Lamb, (Choice grade)									
1963	71.3	48.7	42.9	6.3	36.6	34.7	22.6	12.1	51
1964	73.6	52.5	46.8	7.1	39.7	33.9	21.1	12.8	54
1965 6/	78.6	58.4	53.2	7.9	45.3	33.3	20.2	13.1	58
1965 6/									
Jan.-Mar.	75.6	55.3	50.2	8.1	42.1	33.5	20.3	13.2	56
Apr.-June	79.2	61.0	54.8	8.2	46.6	32.6	18.2	14.4	59
July-Sept.	83.0	58.8	53.7	6.8	46.9	36.1	24.2	11.9	57
Oct.-Dec.	80.4	58.4	54.1	8.5	45.6	34.8	22.0	12.8	57
1966 6/									
Jan.-Mar.	85.7	65.0	61.2	10.2	51.0	34.7	20.7	14.0	60
Apr.-June									
July-Sept.									
Oct.-Dec.									

1/ Estimated weighted average price of retail cuts.

2/ Wholesale value of quantity of carcass equivalent to 1 lb. of retail cuts: Beef, 1.35 lb.; pork, 1.00 lb.; lamb, 1.14 lb.

3/ Payment to farmer for quantity of live animal equivalent to 1 lb. of retail cuts: Beef, 2.25 lb; pork, 2.00 lb.; lamb, quantity varies by months from 2.33 lb. in April to 2.38 lb. in October.

4/ Portion of gross farm value attributed to edible and inedible byproduct.

5/ Gross farm value minus byproduct allowance.

6/ Preliminary.

of milk used for manufacturing purposes increased more than milk for fluid use. The retail cost and the farm value for the dairy products group increased about the same from the previous quarter; as a result, the farm-retail spread changed little. Compared with a year ago, the retail cost for dairy products averaged 2 percent higher and the farm-retail spread was 2 percent narrower.

The retail price of American processed cheese averaged about 4 percent higher in the first quarter than in the previous quarter. Prices of fresh milk were up about 1 percent. Other dairy products were slightly higher than in the preceding quarter.

Marketing Spreads Up for Processed Fruits and Vegetables

Farm-retail spreads for processed fruits and vegetables averaged about 4 percent more in the first quarter this year than the previous quarter and about 3 percent more than a year earlier. Spreads were wider for all processed fruits and vegetables except frozen orange juice concentrate and frozen peas (table 21, p. 55).

Retail prices of processed fruits and vegetables in the market basket averaged higher in the first quarter this year than in the preceding quarter but were about the same as a year earlier (table 20, p. 54). However, prices of orange juice concentrate, frozen peas, and frozen French fried potatoes were down. The total farm value of the processed products was lower in the first quarter than in the previous quarter and a year earlier. Most of the decline resulted from lower prices for oranges and potatoes for processing.

Potatoes and Fresh Vegetables

Prices received by farmers for potatoes in the first quarter this year averaged 10 percent higher than in the previous quarter. But, compared with a year earlier, they averaged 52 percent lower because of increased supplies. Consumers paid about 1 percent more for potatoes in the first quarter than in the previous quarter; however, retail prices were 29 percent lower than a year earlier. Marketing spreads for potatoes were narrower in the first quarter this year than in either the previous quarter or a year earlier.

Farm values for most other fresh vegetables in the market basket averaged higher in the first quarter 1966 than in the previous quarter or a year earlier due primarily to freeze damage of 1966 winter crops. Retail prices for most fresh vegetables were higher in the first quarter this year than in the previous quarter or a year earlier, and spreads generally were wider.

NET INCOME OF LEADING FIRMS MARKETING FARM PRODUCTS 1964 and 1965

Net income (profits after taxes on income) of 150 leading food manufacturing firms totaled 7 percent more last year than in 1964, according to data compiled by the First National City Bank of New York (table 4). A significant factor contributing to the increase in after-tax profits was the second-stage reduction in corporate taxes from 50 to 48 percent.

Of the leading food manufacturing industries, 3 groups showed increases in net income as a percentage of sales, and 2 groups showed declines. Profits after taxes as a percentage of sales declined slightly for baking firms, and declined sharply for meatpacking firms. Rising prices received by farmers for meat animals squeezed meatpackers' profits in 1965. Net income as a percentage of sales for 26 meatpackers declined to 0.6 percent in 1965 from 1.1 percent in 1964. Total profits for the meatpacking firms dropped 38 percent.

Table 4.--Net income of leading corporations marketing agricultural products, 1965 and 1964

Industrial groups	Number of corporations	Reported net income after taxes					
		Total		As percentage of net assets 1/		As percentage of sales 2/	
		1965	1964	1965	1964	1965	1964
		1,000 dol.	1,000 dol.	Pct.	Pct.	Pct.	Pct.
Manufacturing:							
Food--							
Baking	17	76,564	75,446	11.2	11.3	2.9	3.0
Dairy products	12	190,175	165,966	12.5	12.2	3.3	3.1
Meatpacking	26	58,511	94,512	5.0	8.6	.6	1.1
Sugar	14	51,996	43,766	9.3	8.1	3.7	3.1
Other food products	81	426,398	371,182	12.2	11.1	4.2	4.0
Total	150	803,644	750,872	---	---	---	---
Other--							
Brewing	14	59,565	55,642	10.2	10.0	4.4	4.7
Distilling	15	156,508	135,130	9.5	8.5	4.5	4.2
Tobacco products ..	14	310,805	297,125	13.4	13.4	6.0	6.0
Textile products ..	69	308,390	223,359	11.6	8.9	4.2	3.4
Clothing and apparel	91	150,495	116,712	15.6	13.6	4.1	3.6
Distributing:							
Chain food stores ...	59	325,070	310,093	12.5	12.5	1.3	1.3
Department and specialty stores ..	66	393,483	330,521	13.4	12.5	3.0	2.8

1/ Book net assets at the beginning of the year are based on the excess of total balance-sheet assets over liabilities.

2/ Includes income from investments and other sources as well as from sales.

Compiled from "Monthly Economic Letter," published by The First National City Bank, New York, April 1966.

Net income as a percentage of net assets (also known as stockholder's equity) showed about the same pattern as the net income-to-sales ratio, with 3 out of 5 food manufacturing groups showing increases in 1965. The 12 firms in the dairy products group reported the highest return--12.5 percent of net assets compared with 5.0 percent for the 26 meatpacking firms.

Leading firms processing nonfood farm products also had higher total net incomes in 1965 than in 1964. Net income as a percentage of sales likewise was higher in 1965 than in 1964 for 3 out of the 5 industry groups. It declined slightly for the 14 brewing companies and did not change for the 14 firms manufacturing tobacco products. The ratio of net income to net assets also was higher in 1965 for each of these industry groups except tobacco products, for which there was no change.

Total profits of 59 leading retail food chain companies were 5 percent greater in 1965 than in the preceding year. Ratios of net income to sales and to net assets did not change.

THE FOOD MARKETING INDUSTRIES--RECENT AND PROSPECTIVE
STRUCTURAL CHANGES 1/

One outstanding characteristic of the food marketing industries has been growth--growth to serve a burgeoning urban population and an expanding agricultural output. The volume of food products marketed for domestic consumption has increased by more than two-fifths since World War II. Export markets for these products have also grown. And the increase in the output of services performed by the food marketing industries has been greater than the growth in physical volume because of added marketing services per unit of product handled.

This growth has been associated with major changes in the structure of the food marketing industries. Expansion in population and in agricultural production in many areas has created needs for new facilities and business enterprises. Growth facilitated the adoption of new technology. Growing markets made possible economies of scale.

One of the most significant structural changes has been the rise of supermarkets and large food retailing organizations. Besides producing great changes in the retailing of food, these large retail organizations have affected the wholesaling and processing of food products and even the selling of farm products. Many in effect became wholesalers, performing the wholesaling functions for many of the products they retailed. Many also participated in manufacturing by contracting for the manufacture of products meeting their specifications and packed in containers carrying their labels or by manufacturing products themselves.

Another structural change of note has been the trend to fewer but larger establishments--not only in retailing, but also in most food processing and in the assembly of farm products. Technological developments such as changes in equipment and improved transportation and communication did much to intensify this trend. Changes in ownership by purchase or merger also have furthered this movement. A surviving company often concentrated its operations in its most efficient plants, which often were its largest plants.

Technological developments and economies of scale that only relatively large plants can exploit have had a major part in improving efficiency in the marketing system. To the extent that gains in efficiency have been achieved, consumers and farmers as well as marketing firms have benefited. However, the competitive structure of the market for farm and food products has changed with the trend to fewer and larger food marketing establishments. The number of companies has decreased along with the number of establishments. Thus, in many food marketing industries there are now fewer buyers and sellers. In many areas, the firms buying from farmers are fewer and larger and they are likely to possess more extensive and accurate information about marketing conditions than is available to most smaller firms and to most farmers. Moreover, traditional marketing transactions have in many instances been bypassed, such as in the direct movement of fresh fruits and vegetables from assemblers to retailers without passing through city wholesale markets. These changes raise questions as to the extent and type of competition in the modern marketing system. The National Commission on Food Marketing has given major attention to these subjects in its 2-year study. It is scheduled to report on June 30, 1966.

1/ This article has been prepared by the Marketing Economics Division, Economic Research Service, USDA. The names of persons contributing to the article appear with the section each prepared.

Livestock and Meat 2/

Livestock marketing encompasses the host of activities and institutions associated with coordinating the supply of and demand for livestock. The participants in livestock supply are the farmers, ranchers, and feeders who produce and offer livestock for sale. The direct participants in livestock demand are the meatpackers, feeders, and ranchers who offer to buy livestock for their slaughter plants, feedlots, and stock herds. Many agencies and individuals offer their services to facilitate the buying and selling transaction and other marketing activities.

Changes in Livestock Marketing

Livestock marketing is changing in 3 important ways: (1) In methods of buying and selling; (2) in basis of sale; and (3) in transportation of livestock. Marketing firms or agencies have initiated some of these changes in a search for new and more efficient ways of doing business, rather than as a reaction to changes outside their control.

Some of the more obvious changes have been in the channels through which livestock move to market and in the methods by which they are sold (fig. 1 and 2). During the past 15 years, the volume of direct sales has increased rapidly. As recently as 1950, federally inspected packers purchased 75 percent of their cattle, 57 percent of their calves, 42 percent of their hogs, and 52 percent of their sheep and lambs at terminal markets. By 1964, packers had increased purchases through other channels so that purchases at terminal markets had declined to 36 percent of their cattle, 19 percent of their calves, 24 percent of their hogs, and 29 percent of their lambs. Even though the percentage of slaughter cattle purchased was down by more than half, actual volume was only 7 percent less in 1964 than in 1950. Volume of other slaughter livestock purchased at terminal markets decreased substantially between 1950 and 1964. Hog purchases declined 25 percent; sheep and lambs, 45 percent; and calves, 73 percent.

Increased direct sales to packers accounted for the relative decline in packer purchases on terminal markets. In 1964, 45 percent of the cattle purchased by packers bypassed organized markets and were bought direct from producers, feeders, or dealers. Thirty-two percent of the calves, 63 percent of the hogs, and 58 percent of sheep and lambs were also direct purchases. The percentage of livestock purchased by packers at auction markets changed very little--auction volume grew at about the same rate as livestock production.

Increased direct marketing has considerable impact on many segments of livestock marketing, including producers, marketing agencies, organized markets, and meatpackers. Producers selling livestock direct avoid some of the marketing costs, such as yardage and feed at organized markets. Transportation costs paid by the producers may also be reduced, depending on the distances to packing plants, buying stations, and public markets. The producer can act as his own selling agent and avoid commission charges, or hire commission services in areas where they are available. Commission agents are useful not only for their selling skill and knowledge of markets, but also to guarantee prompt payment and take care of other details of the sale.

Common marketing practices in direct selling may make it more difficult for the seller to evaluate marketing alternatives. Such things as "pencil shrinking," the time of day the livestock are weighed, and length of "stand" after livestock are taken off feed and water before weighing affect sale weights and net returns. Many producers, particularly the smaller ones, do not have sufficient information to evaluate the economic effect of the conditions of sale and to bargain effectively with prospective

^{2/} Prepared by William N. Capener and Willis E. Anthony, agricultural economists.

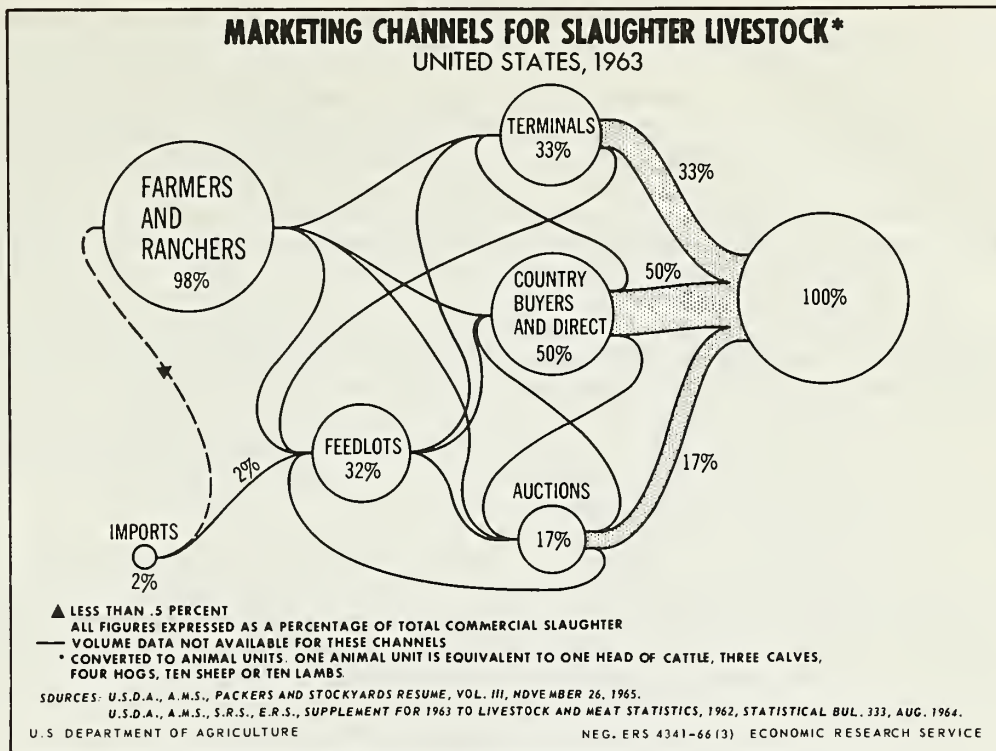


Figure 1

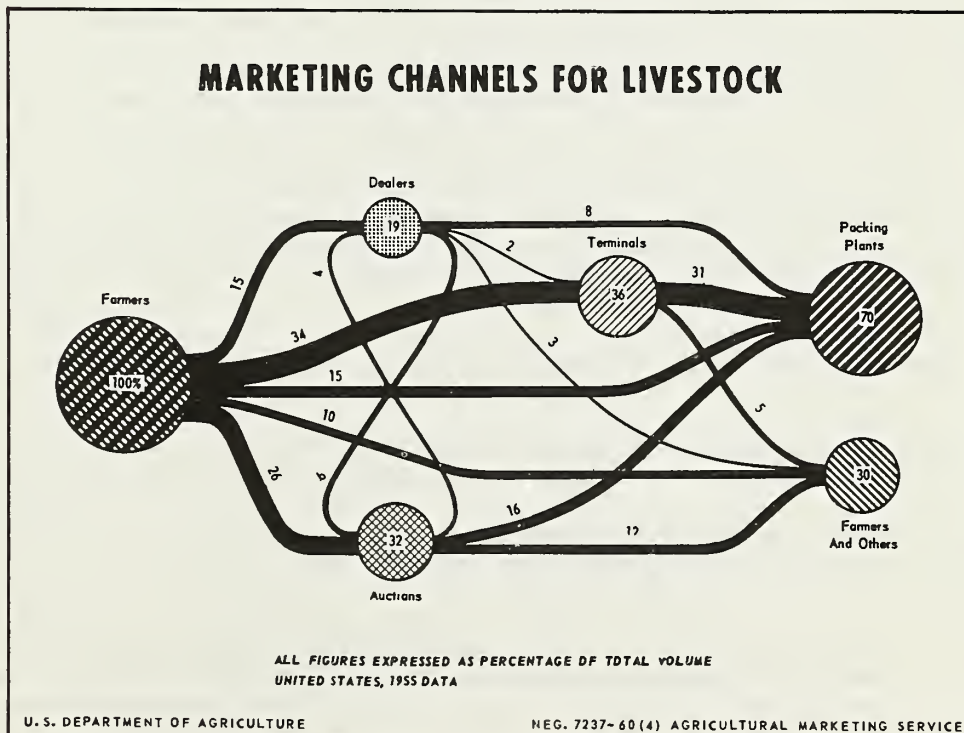


Figure 2

buyers. However, these disadvantages could be corrected for they are not a necessary part of direct selling.

Rising urban land values, reduced volume at some terminal markets, continued bunching of receipts near the first of the week, labor contracts calling for fixed weekly wages, and older facilities are creating serious problems of operating efficiency at some terminal markets. From the standpoint of the meatpacker, country buying in some instances increases and in others decreases his direct procurement costs. Country buying may also enable the packer to better regulate the flow of livestock to his plant and avoid costly "gluts" or shortages on certain days.

During the next few years, the number of livestock sold direct will probably continue to increase and the percentage sold at terminal stockyards will probably continue to decline. Auction markets will likely sell about the same percentage of livestock as they do now. At these markets, producers sell small lots of animals, often those that are culled from breeding herds. Many auctions conduct special sales of feeder livestock. The volume of fed cattle and lambs sold through auctions has been and probably will continue to be rather small.

Vertical integration is a subject of spirited discussion in the livestock industry. For years, food chains have been integrating the wholesaling and retailing of meat. A few retail food chains also own meatpacking plants and feed some cattle and lambs. Many meatpackers also feed cattle and lambs. The number fed doubled during the past 10 years. The number of cattle fed by packers as a percentage of all fed cattle marketings increased from 4.6 percent in 1955 to 6.5 percent in 1964. An increase in vertical integration reduces the proportion of livestock handled by marketing agencies since it eliminates one or more marketing transactions.

Futures trading in live animals is a recent innovation which has received much attention. Since there is virtually no delivery of livestock on futures contracts, futures trading has not altered directly the way in which livestock are sold. However, it is an important innovation in that it is a vehicle for establishing future prices for livestock and for transferring price risks.

Changes in basis of sale have also appeared. The number of livestock--particularly cattle--sold on a carcass grade-and-yield basis has been increasing. During 1961, about 13 percent of all cattle, 12 percent of all sheep and lambs, 6 percent of all calves, and 4 percent of all hogs sold direct to packers were sold on a grade-and-yield basis. Comparable national data for other years are not available. However, beginning on June 1, 1965, the Market News Service of USDA began reporting direct sales of slaughter cattle in interior Iowa and southern Minnesota. During the first 10 months of this report, direct sales of almost 2.5 million head were reported. On the average, 27 percent were sold on a grade-and-yield basis. In that reporting area, at least, the carcass-grade and dressed-weight basis is an important method of selling cattle.

Carcass grade-and-yield selling has an inherent marketing advantage. It is a more accurate way of determining value. For animals sold on a live basis, only an estimate is made of carcass quality and weight. Whereas actual carcass grades and weights are the basis of grade-and-yield selling. This may account for the increasing volume of some species of livestock sold on this basis.

In practice, however, grade-and-yield selling has had several shortcomings and inequities. In cattle sales cold-carcass weight, on which sale is based, is estimated by applying a "pencil shrink" to the hot-carcass weight. This "shrink" may vary from 1.5 to 3 percent among packing plants. Furthermore, the same "pencil shrink" is sometimes not used for all purchases by the same packing plant. This is not a problem in grade-and-yield selling of hogs since sale is based on hot-carcass weights.

Grade-and-yield prices are not directly comparable to live prices. This creates problems in comparing and evaluating markets. Many livestock producers are wary of grade-and-yield selling because it relies heavily on mutual trust in reporting carcass grades and weights accurately and honestly. In spite of the economic advantage of grade-and-yield marketing, it probably will not increase rapidly until there is more confidence in grading, weighing, and carcass identification at the packing plant.

New patterns of transportation are closely associated with changes in the livestock industry. Growth and development of the highway system and of truck transportation--particularly since World War II--has brought many changes in the livestock industry. What has happened in the transportation of cattle and calves demonstrates this change. Between 1948 and 1963, shipments of cattle by rail declined from 7 million tons to 2.1 million tons--a 70 percent drop. This trend is continuing. The primary impact of these changes has been to increase flexibility of marketing.

Changes in Livestock Production

Many of the changes in livestock marketing are closely related to changes in the livestock industry. These include changes in the quantity, in the quality, and in the location of production.

Cattle production.--Major changes in cattle production include: (1) A rather rapid and large increase in beef cattle production, (2) an expansion of the areas of production, and (3) developments in cattle feeding.

Between 1945 and 1965, cattle numbers increased 25 percent. The number of beef cattle increased more than 35 million head but dairy cattle numbers declined by 14 million head. Since 1946-49 the number of cattle and calves slaughtered annually has increased by 23 percent while total pounds of beef and veal has increased by 79 percent.

Production of beef cattle is widely dispersed and is becoming more dispersed every year. The beef-calf crop is used in this article as a measure of the geographic distribution of beef cow-calf production. ^{3/} In 1965, 6 Great Plains States ^{4/} produced 40 percent of the total; the 11 other Western States produced 22 percent. Eight of the North Central States ^{5/} produced 16 percent and 8 Southern States ^{6/} accounted for another 18 percent of the calf crop.

Beef production has increased in all States but New Mexico. By regions, the largest increase in actual numbers has taken place in the 6 Great Plains States. This region accounted for 38 percent of the increase in the national beef-calf crop, although its gain during the past 20 years was slightly less than the national average rate of growth.

Annual production of beef calves in the North Central States increased 150 percent between 1945 and 1965--about 7.5 percent per year. In the Western region, 69 percent more beef calves were produced in 1965 than in 1945; this was the lowest rate of growth of any area in the United States. In the 6 Southern States the annual beef-calf crop has increased by 154 percent in the past 20 years or 8 percent per year.

^{3/} The beef-calf crop was estimated by multiplying the number of cows and heifers 2 years old and older not kept for milk on hand January 1 in each State by the State calving percentage. This assumes that the calving percentage is the same for both dairy and beef.

^{4/} North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas.

^{5/} Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana, and Ohio.

^{6/} Arkansas, Louisiana, Mississippi, Alabama, Georgia, Florida, Tennessee, and Kentucky.

The East Central States 7/ --particularly Kentucky and Tennessee--have not been an important source of beef cattle, but their beef-calf crop increased from 465,000 in 1945 to 2.2 million in 1965, almost 20 percent per year. The Southern and East Central States combined produced almost as large a beef-calf crop in 1965 as did the 11 Western States.

Cattle feeding.--The number of cattle moving through feedlots before slaughter has been increasing--especially during the past 10 years. In 1955, 10.8 million cattle were fed--42 percent of total commercial cattle slaughter. By 1964, 17.3 million fed cattle were marketed, 56 percent of all commercial cattle slaughter. The number of cattle feeders is declining but those continuing in or entering the cattle feeding business have been feeding an increasing number of cattle. The number of feedlots with capacities of over 1,000 head has increased substantially every year.

Thus, livestock marketing has adjusted to changing location of cattle production, increased size of some producers, and increased quantities of grain-fed beef. In some cases, new methods of marketing may have induced these changes.

Hog production.--Hog production has grown at a slower rate than cattle production. Between 1950 and 1965, numbers of hogs produced for slaughter increased by approximately 19 percent. But growth was far from uniform among geographic regions. Greatest growth was in the South Atlantic States, where hog marketings increased 30 percent between 1950 and 1964. In some areas hog marketings declined: 44 percent in the South Central States, 21 percent on the West Coast, and 19 percent in the Mid-Atlantic States. Thus, there has been a shift in location of hog production, with increased concentration in some producing areas.

Hog production remains concentrated in the North Central States. In 1964, the West North Central States contributed 50 percent of the total hog production, and the East North Central States accounted for another 33 percent. The remaining hog production was spread widely. States in the Northeast had 1 percent, the Southeast 6 percent, the South 8 percent, and the Western States the remaining 2 percent.

Hog production remains chiefly in the hands of family farms that raise pigs, feed hogs, and produce the grain required for feed. Nevertheless, hog enterprises have become larger. Between 1949 and 1959, the proportion of hog farms farrowing 10 or more litters increased from 29 percent to 35 percent. Average number of hogs sold per hog farm increased 60 percent between 1954 and 1959. These size trends apparently have continued since 1959. Thus, as with most other farm enterprises, there has been an increase in size of hog-producing units and a decline in the number of units.

Some separation of feeder pig production from hog feeding has occurred in much the same way as feeder cattle production is separated from cattle feeding. This has occurred chiefly in the fringes of the Corn Belt. Some producers, chiefly in the northern and southern fringes of the Corn Belt, with surplus labor and short grain supplies have been specializing in feeder pig production. Other farmers, chiefly in the central Corn Belt, with ample feed grains and more fully utilized labor have specialized in hog feeding. This development has introduced another market transaction.

Sheep and lamb production.--The lamb crop, like the beef-calf crop, depicts the geographic location of sheep and lamb production. Sheep production is still widely dispersed throughout the country, but not so widespread as beef production. Almost half of the 1965 lamb crop was produced in the 11 Western States. Another 28 percent was produced in the 6 Great Plains States of which over half was in Texas. These 17 States produced almost three-fourths of the Nation's lamb crop. The 8 North Central States made up the only other important lamb production region. Their lamb crop amounted to 19 percent of the total.

7/ Virginia, North Carolina, South Carolina, West Virginia, Kentucky, and Tennessee.

Sheep numbers in the United States reached a high in 1942, when over 56 million head of sheep and lambs were on farms and ranches on January 1. Numbers then declined sharply for several years, until there were only about 30 million on hand on January 1, 1950. Sheep numbers increased slightly during the 1950s, but another, more gradual, decline started in 1960. By 1965, the number of sheep was less than half that in the 1930s and early 1940s.

Reductions occurred in both the western range production regions and in areas where farm flocks predominate. They were greatest in the 11 Western States, although their rate of decrease was the same as that for the whole country. Forty-six percent of the reduction in the lamb crop occurred in the Western States, which produced 46 percent of the 1965 lamb crop. The rate of decline was slightly lower in the Great Plains States and slightly higher in the North Central and East Central States.

Lamb and mutton production has not declined as much as sheep numbers because of increased feedlot finishing of lambs. Average weight of sheep and lambs slaughtered increased from 80 pounds in 1931-32 to 99 pounds in 1964.

Prospects

At present, no signs are evident of important changes in the current direction of livestock production trends. Beef has high consumer acceptance. This is not likely to change in the foreseeable future. The development of lower-priced vegetable protein substitutes for meat does not at present pose much of a threat to beef. Beef cattle production will continue to grow, with further expansion in the number of fed cattle. The trend to large feedlots will continue. Expansion of beef cow herds will continue in areas where recent growth has occurred. Hog production will also grow but much less rapidly than beef if recent trends in per capita use continues. Hog production will probably remain as a family farm enterprise, but production per farm will increase. It is not likely to be integrated in the manner of broiler production. Little sign of change is evident in the pattern of sheep production. Sheep will continue to be produced on the Western range in areas where they are more suitable than cow herds. Demand for both lamb and wool has declined because of increased production of close substitutes--synthetic fibers for wool, and beef and poultry for lamb. A declining number of sheep slaughterers in some areas may affect future sheep production.

Changes in Meatpacking

Changing characteristics of the meatpacking industry, insofar as they affect livestock marketing, fall into 2 broad areas: Shifting locational orientation of slaughter plants, and changing size structure of meatpacking firms.

Current reorientation in plant location has 2 dimensions. Relative shifts in plant capacity among regions is occurring as new slaughter plants which represent added slaughter capacity to the industry are being built in the areas of rapid growth in livestock production. There are also shifts in plant sites within regions, as new slaughter plants built to replace obsolete facilities are relocated away from old terminal market centers. Consequently, there is an increasing tendency for slaughter to take place nearer the point of livestock production. This reorientation in slaughter has often called for different ways of marketing livestock.

Shifts in slaughter among regions have been chiefly in response to shifts in production among regions. For a long time, meatpackers have located slaughter plants in the same general regions where livestock is produced. There are several reasons for this. They often found such locations desirable for insuring constant livestock supplies and for obtaining information about the supply side of the market. Furthermore, livestock shipped long distances are subject to shrinkage, injury, and death.

For these reasons, geographic regions with the greatest growth in livestock production also show the greatest increase in livestock slaughter and in the number of slaughter plants. Cattle production and feeding have grown most rapidly in the Southern, Southeastern, and Western States. These States also show the greatest growth in cattle slaughter. In like manner, hog production has grown most rapidly in the North Central and Southeastern States, and these States have shown the greatest growth in hog slaughter. In addition, changing transportation cost structures influence location as they altered profitability of plants in some regions relative to others.

Besides broad shifts in location of slaughter among regions, the location of plants within regions has shifted. When large, diversified, and integrated slaughter plants were built, many factors in addition to availability of livestock were important in the selection of a plant site. For example, it was necessary to be near terminal railheads for assembly of livestock and for meat distribution, to be near points where power could be economically supplied (first steam, then electricity), to be near ample labor supplies (in large cities), and to be near communication centers for flow of information.

In today's economy, these other factors in plant location have changed. Improved truck transportation and highways make it possible to assemble adequate livestock supplies at and ship meat from non-terminal points. More flexible power sources are available--adequate fuel and electricity are available almost everywhere. Labor requirements per unit of output have been reduced. Rapid communication of information is possible at any location. Hence, plants no longer need to be at the old terminal points. New plants generally are not being built there. As a result, non-terminal slaughter has increased. This orients the point of the livestock sale transactions toward the point of production instead of near centers of consumption. Furthermore, it minimizes the distance of shipment of live animals between point of production and point of slaughter.

A related change in functions of meatpacking plants also has an impact on location. An increasing number of plants are specializing in types of species slaughtered and in slaughtering or processing rather than slaughtering and processing.

Plant specialization in species slaughtered has gone hand in hand with reorientation in plant location, and increased regional specialization in livestock production. The location of plants at terminal markets favored multi-species operations because all livestock species were assembled at the plant gate on the market. As livestock-producing regions become more specialized, and as interior plants are built, the newer plants must ship in 1 or more species from other areas if they are to slaughter all livestock species. To avoid long-distance shipping and high transportation costs for some livestock species, slaughter plants in specialized livestock areas would be specialized, unless increased production costs offset procurement economies.

In the past, specialized interior plants usually had higher slaughter costs which offset procurement economies. But new technologies, such as on-the-rail dressing, mechanical knives, and more efficient refrigeration, have made relatively small specialized plants efficient. Furthermore, increased area specialization in livestock production has tended to broaden the specialized procurement area. It is now possible to take advantage of procurement savings by species specialization in a plant drawing livestock from a relatively small geographic area.

These factors have also facilitated separation of the slaughtering and meat processing functions. Because meat processing plants tend to be consumer market oriented, different market factors affect location decisions for slaughter plants and for processing plants. New technology, management, and meat merchandising have added further impetus to the location of new slaughter plants nearer areas of livestock production.

Changing size characteristics of firms in the slaughter industry also have an impact on livestock marketing. Data for the federally inspected sector of the industry show an increasing number of firms with decreasing variation in size. ^{8/} Concentration of slaughter in the hands of a few large firms has declined. In 1950, the 4 largest firms slaughtered 51 percent of the federally inspected production. By 1964, their share had dropped to 33 percent. This decline occurred because of a growing number of medium-sized firms. Slaughter by the 4 largest firms has shown only a slight increase, while their smaller rivals have increased in number and size, and are procuring the major share of the growing livestock production. An increase in number of commercial livestock buyers coupled with declining predominance of the largest firms, is often associated with enhanced competition for livestock. However, it doesn't guarantee greater competition in all geographic areas or for all livestock species. In some areas, there may actually be fewer buyers for livestock as a nearby plant becomes dominant, or as plants are moved to new locations.

Meat wholesaling.--Organization of the wholesale meat industry and structure of meat markets has an impact on livestock marketing insofar as it affects organization and behavior of the meatpacking industry. The wholesale meat trade has been buffeted by 2 trends: (1) Transfer of the bulk of retail meat sales into the hands of food chains which perform their own "wholesaling" functions by purchasing directly from meatpackers; (2) growth in the volume of meat going to hotels, restaurants, and institutions, which require different wholesaling services from those formerly required by the neighborhood butcher shops. The impact of the first trend is to reduce the number of independent wholesalers and packer branch houses. The impact of the second trend is to increase their number and change their function.

Bureau of the Census data from 1948 to 1963 show a growing number of establishments operated by meat wholesalers and brokers and a recent increase in number of packer branch houses following an earlier decline. At the same time, average volume of sales per wholesale establishment has increased. These data indicate that meatpackers are dealing with a slowly increasing number of wholesale buyers, whose average sales per establishment is growing.

The market faced by these wholesalers requires different meat handling services from the old retail market. Merchandising policies of retail chains place a higher priority on consistent quality than on quality levels. In the non-retail trade, great emphasis is placed on particular cuts of meat and parts of the livestock carcass. To the extent that the hotel, restaurant, and institutional market for meat has demand characteristics different from the retail market, the task of transferring consumers demand for meat into demand for livestock is compounded.

Prospective developments.--Many of the factors producing changes in meatpacking have not as yet run their course. As livestock production continues to expand in the "growth" areas, new slaughtering capacity will be built there. This will be associated with increased specialization in slaughter, unless radically new technology calls for re-integration of meat-packing operations within the plant. As old plants continue to be "depreciated out" and replaced, the critical factors in selection of plant sites probably will lead to choice of interior locations in most instances. Thus, the past pattern of locational reorientation in slaughter will likely continue.

If the recent changes in size structure of the meatpacking industry continue, there will be a further growth in the number of medium-size firms and a decline in concentration of slaughter by the largest firms. However, it is not at all clear that this trend will continue. If profitability of investment in meatpacking increases

^{8/} In 1964, FI slaughter accounted for 80 percent, or more, of all slaughter except calves. This percentage has been growing as more firms enter the national meat market.

relative to other industries in which large firms invest, it is likely that they could rather easily increase their share of slaughter--probably at the expense of smaller firms. Some of the new small firms are not bulwarks of financial strength. Unfavorable circumstances could push them to bankruptcy--to be absorbed by their larger competitors. Consequently, the trends in industry size structure could readily change.

Dairy Products 9/

The structure of the dairy industry has been changing ever since it began to be organized on a commercial basis a century ago. In the post war period, the process of change has accelerated in many respects.

Plant Numbers Declining

The ranks of fluid milk handlers have been thinning ever since the development of city milk distribution began over 75 years ago. Throughout this period, a major influence has been a shift in the scale curve--the relative costs of small firms as compared to large ones. ^{10/} In the early days, very little happened to fluid milk between the farmer and the consumer. Equipment used was simple and the costs of a small distributor were not greatly different from those of a large one. The introduction of the glass milk bottle before the turn of the century was one of the earliest developments causing some shift in the shape of the scale curve. Even simple bottle-filling equipment was expensive when used for a few quarts of milk a day and, as a result, many small distributors went out of business.

In the first 2 decades of the 20th Century, many cities adopted ordinances requiring the pasteurization of milk. These requirements increased the costs of small distributors compared with those of large ones, and many were no longer able to compete. In the 1920s and 1930s, the introduction of classified pricing plans providing for uniform prices to producers by all handlers, both large and small, forced many small handlers to pay the same prices as their larger competitors. Many found it impossible to do so and they too went out of business. In the late 1930s and 1940s, the introduction of the paper carton acted to raise the cost levels of smaller distributors. Since World War II, several technological and economic developments--no single one of them outstanding--have tilted the scale curve even further.

The number of fluid milk bottling plants (excluding producer-dealers) in the United States declined 53 percent between 1948 and January 1965. It declined at a slightly faster rate in 82 Federal order market areas (excluding New York-New Jersey). Between 1950 and 1964, the number of pool handlers in these markets declined 57 percent (fig. 3).

Most of the plants that went out of business were small. Some small plants increased their volume by installing new equipment or by fuller utilization of capacity. The following distribution of plants by annual volume shows that plants bottling less

^{9/} Prepared by Alden C. Manchester, agricultural economist.

^{10/} The economies of scale curve shows the relationship of costs to the size of operation. Research shows that processing costs are several times as high in very small plants as they are in fairly large plants. Delivery costs per unit also tend to decline as scale of operation increases, due to larger volume per stop on delivery routes and shorter distances between stops.

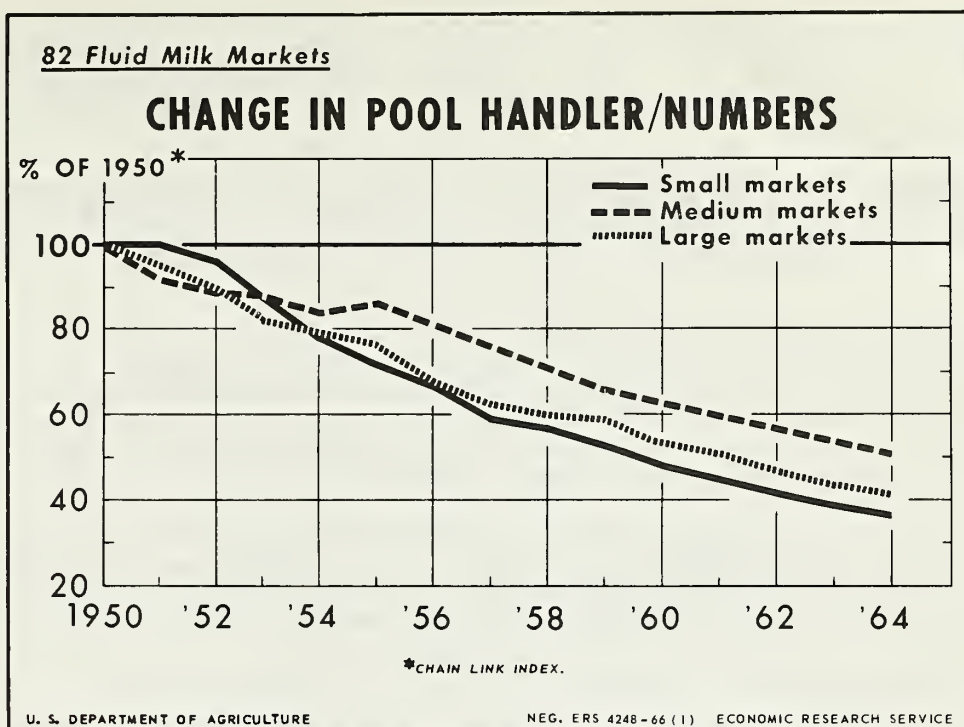


Figure 3

than 5 million quarts of milk a year declined from 93 percent of the total in 1950 to 64 percent in 1964:

Annual volume per plant	1950	1964
Million quarts	Percent	Percent
Under 1	72	28
1-4.9	21	36
5-9.9	4	13
10 or more	3	23
Total	100	100

The number of plants manufacturing dairy products has fallen somewhat less rapidly than fluid milk plants. Between 1944 and 1961, this type declined 37 percent. (These are the only years for which data on the total number of plants manufacturing dairy products are available.) Between 1944 and 1964, the number of plants making butter, cheese, evaporated milk, and ice cream declined more than half. Plants producing creamed cottage cheese and nonfat dry milk declined somewhat less as production of these products increased more rapidly than many others.

The number of large plants manufacturing dairy products has increased, and small plants have been disappearing. In 1944, 122 plants produced at least 2 million pounds of butter per year. In 1963, 219 plants were in this size category. During this period, the number of smaller plants declined from about 3,900 to about 1,100. The smaller plants accounted for 74 percent of the butter output in 1944 and 38 percent in 1961.

Changes in American cheese plants generally were similar. In 1944, 155 plants were producing 1 million pounds of cheese or more per year. By 1963, there were 431 such large plants. At the same time, the number of small plants declined from about 2,000 to 600. The small plants accounted for 70 percent of the production in 1944 and 38 percent in 1961.

Technological developments--especially new types of equipment and processes and more efficient equipment--were primarily responsible for the decline in the number of small dairy manufacturing plants and the increase in large-scale plants.

Concentration

Eight large dairy companies play an important role in the market for all types of dairy products. Several of them date back into the 19th Century but the major growth of all occurred since the turn of the century and all but one since the mid-1920s. Much of their growth--like that of other industrial firms throughout the economy--occurred during 2 of the 3 merger movements in the United States.

The first wave of mergers around the turn of the century did not include significant activities in the dairy industry. The second merger movement--during the latter half of the 1920s--saw one dairy company with sales of over \$100 million in 1919 more than double in sales volume, primarily because of mergers within the dairy industry. Another company was organized in 1923 and immediately began a period of rapid growth, primarily through mergers. By 1930, it had become the largest company in the dairy industry.

The 1950s brought the third major merger movement in the American economy. As in many other industries, several companies in the dairy industry grew very rapidly, primarily by merger with other firms in the industry. By 1956, each of the 8 national dairy companies had sales of over \$100 million, although not entirely of dairy products.

In 1934, the 3 largest dairy companies made 22.8 percent of the sales of packaged fluid milk and cream made by all commercial handlers (excluding producer-dealers). By 1950, their share had declined to 16.4 percent. Between 1950 and 1957, the share of these 3 companies increased modestly from 16.4 to 18.8 percent. During the same period, the share of the fourth to eighth largest companies increased from 4.3 percent to 8.3 percent. This reflects the rapid growth through mergers of companies of minor importance at the beginning of the decade. No later figures are available on the market share of these large companies on a national basis.

Horizontal acquisitions made by dairy companies have slowed substantially since 1957, due primarily to the Federal Trade Commission's challenge to the acquisitions of a number of the large companies under Section 7 of the Clayton Act. In some of these cases, settlements have been reached in which the companies have agreed to divest themselves of some of the acquired companies and to limit further acquisitions in the dairy industry. Therefore, it appears likely that, when these divestitures have been completed, the share of the 4 largest and also the 8 largest companies in the national fluid milk market will be near the 1957 levels or somewhat lower.

The large dairy companies have diversified increasingly over the years, entering a wider and wider variety of product lines. For 5 large dairy firms, sales of non-dairy products increased from 11.9 percent of total sales in 1940 to 18.9 percent in 1950 and 29.2 percent in 1960. ^{11/} Between 1961 and 1964, one company increased its

^{11/} Bartlett, R. W. An Analysis of Specific Comparisons and Conclusions in House Report No. 2231 on "Small Business Problems in the Dairy Industry," Ill. Agr. Expt. Sta., Res. Rpt. AERR-46, 7 pp. September 1961, p. 1.

sales of nondairy items from 5 percent to 40 percent of total sales. ^{12/} Some large companies--prevented from expanding their activities in the dairy industry--now are seeking and completing mergers which take them into many new lines both within and outside the food industry.

Concentration in the manufactured dairy products industries has increased little at the manufacturing level in the past 30 years. Between 1947 and 1958, concentration of production--measured by the market share of the 4 largest and 8 largest companies--declined in the butter industry, changed only slightly in concentrated and dried milk products and frozen desserts, and increased in the natural cheese industry.

In local fluid milk markets, the market share of the 4 largest handlers changed very little in middle-sized and large markets between 1950 and 1964 and increased sharply in small markets (fig. 4).

Distribution--Wider Variety of Outlets

The distribution system for fluid milk, which 40 years ago was based largely on home delivery, has changed to a wide variety of outlets including supermarkets, specialized dairy stores, convenience food stores, vending machines, gasoline stations, and drive-in dairies. The proportion of fluid milk sold on home delivery routes has declined from probably 80 to 85 percent of the total 40 years ago to 25 to 35 percent of the total today.

For a group of 80 fluid milk firms, home-delivery declined from 37 percent of the milk sold in 1954 to 29 percent in 1964. Wholesale deliveries increased from 48 percent in 1954 to 60 percent in 1964, and platform sales (to sub-dealers and some large retailers) declined from 11 to 9 percent.

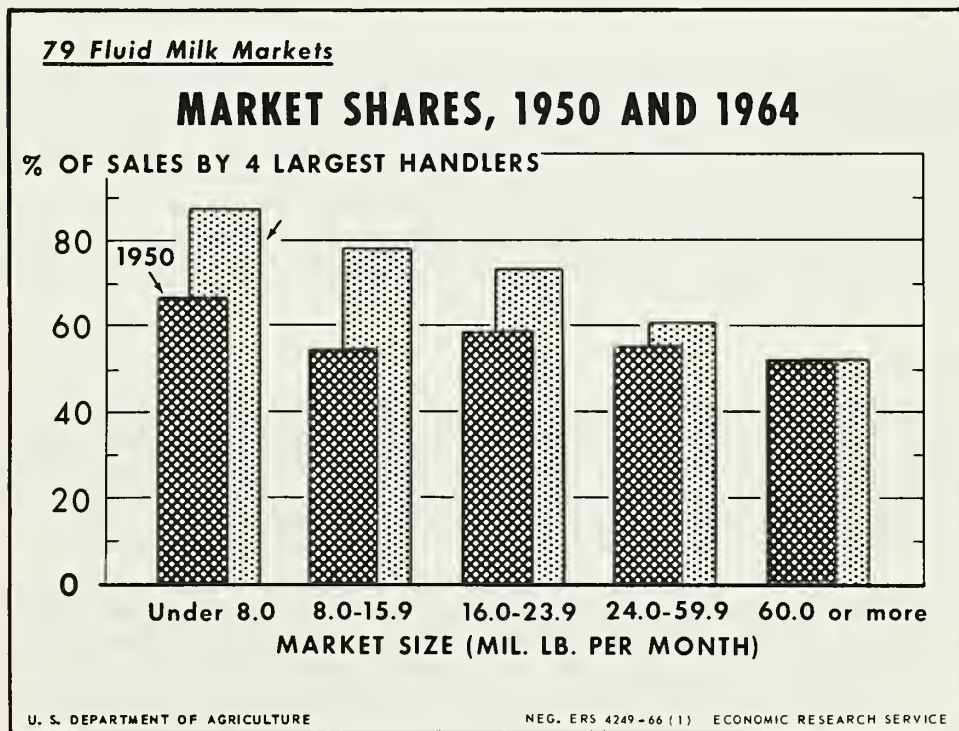


Figure 4

^{12/} Dun and Bradstreet, Dun's Review and Modern Industry, March 1965, p. 92.

Specialized distribution firms (sub-dealers or vendors) are becoming increasingly important in the distribution of fluid milk. There are about 3,900 fluid milk bottling plants in the United States and at least twice that many sub-dealers. Many of these operate only 1 or 2 delivery routes to households, but others are substantial firms with large businesses. In many cases, firms closing their bottling plants have become sub-dealers for other fluid milk plants. In some cases, a number of small distributors have joined together to establish a jointly owned bottling plant while they maintained their separate identities as distribution firms.

The growth of supermarkets has also markedly affected the merchandising of ice cream. Thirty years ago drug stores sold most of the ice cream. After the introduction of the supermarket and the half-gallon container, retail sales of ice cream rapidly shifted to supermarkets. In recent years, specialty ice cream stores have entered the picture, most of them selling relatively high-priced ice cream to consumers who prefer ice cream of a higher butterfat content or different texture than that commonly sold in supermarkets.

Sub-dealers are increasingly important in ice cream distribution, although not to the extent found in fluid milk distribution. Large ice cream manufacturers, like fluid milk distributors, are consolidating their manufacturing operations in fewer and fewer locations and establishing distribution depots from which deliveries are made. Often the ice cream plants which are closed become distribution depots.

The retail cheese market today is drastically different from that of 30 years ago. Development of new types of cheeses and new processing and packaging methods led to the present supermarket cheese departments with 50 to 100 or more varieties, types and packages, in place of the handful of varieties from which the grocer cut a chunk. Natural cheese from several countries and a seemingly endless variety of processed cheeses, cheese foods and spreads are available--all prepackaged and many of them sliced.

The principal changes in butter marketing include the nearly universal packaging in one form or another and the virtual disappearance of the old butter tub, the increased proportion of Grade A and AA butter, the more widespread use of consumer grades for butter as a merchandising tool and the increase in private labels.

In the postwar period, nonfat dry milk became a consumer product of some importance when the instantized product was introduced. It is sold under private labels by many retail groups and under a small number of packer labels of a few major companies.

The Next Decade

Where might some of these developments be expected to lead during the next decade? First, economies of scale will continue to favor large firms, and the number of firms will continue to decline. This does not mean that the largest firms will increase their share in many individual markets. Primarily, it will be a matter of more nearly equalizing the power of large and middle-size firms.

Secondly, shifts of major importance in the functions performed by different types of firms in the marketing system for fluid milk can be expected. By 1975, most fluid milk processors will have transferred the entire supply function to producer cooperatives, including management and disposal of surplus fluid-grade milk. Many manufacturing plants will supply cultured and concentrated products to fluid milk distributors.

Similarly, many processors will rid themselves of the route distribution function, transferring route operations to others--sub-dealers or vendors--or selling at the

platform to retail organizations. Perhaps a third to a half of the milk they sell will be marketed under the private labels of chain stores, retail groups, or vendors.

As processors become more specialized in the processing function, individual plants will grow in size and distribute over wider and wider areas. Distribution areas of 300 to 500 miles from the fluid milk plant will not be uncommon 10 years from now.

Further technological developments are likely to reduce labor requirements in processing, particularly in cheese production, which now takes place in relatively small plants compared to plants manufacturing other dairy products.

Poultry and Eggs 13/

In recent years, changes in the poultry and egg marketing industries have been occurring at an accelerated pace. As in most other agricultural marketing industries, there has been a trend toward fewer and larger firms.

Egg Assemblers, Packers, and Processors

A comprehensive national survey made in 1958 showed that the East and the West North Central regions had the largest numbers of egg assembly plants. These regions also had a larger proportion of the handlers in the United States than they had of the U.S. egg production. The reverse was true for the New England, Middle Atlantic, South Atlantic, and Pacific Coast States. A comparison of 689 egg assemblers reporting for the Commercial Egg Movement Report in 1965 with 795 in 1963 suggests larger plants are handling an increasing share of the volume (table 5). Average volumes per plant were somewhat smaller in the East and West North Central regions than in other important egg production areas.

Although the exact number of plants producing liquid, frozen, and dried eggs in various forms is not known, an indication of trends in their number and location may be obtained from the listing of plants authorized to operate under USDA egg inspection and grading programs. Number of plants producing frozen eggs declined from 1960 and 1965. More than three-fifths of these plants were in the Midwest in 1965. However, that region lost nearly one-third of its plants between 1960 and 1965, while numbers tripled in the South. The number of plants producing dried eggs under Federal inspection increased from 16 in 1960 to 21 in 1965. The largest number was in the Midwest. The largest increase from 1960 to 1965 also occurred in that region.

Poultry Processors

Plants slaughtering and eviscerating poultry under Federal inspection process about 87 percent of the poultry sold off farms. While output has been increasing, the number of plants has been declining (table 6). From 1962 to 1964, the number of plants fell almost 10 percent, although output increased 11 percent. Average slaughter for all plants under Federal inspection increased from 15 million pounds per plant in 1962 to 18.5 million pounds in 1964. Plants slaughtering 30 million pounds or more annually accounted for 48 percent of the slaughter in 1962 and 57 percent in 1964. The largest increases occurred in the South Atlantic and South Central regions. These regions lead in broiler production. Plants slaughtering young chickens tend to have a larger annual output than those slaughtering other kinds of poultry, mainly because of their year-round operation.

13/ Prepared by Fred L. Faber and Frank M. Conley, agricultural economists.

Table 5 .--Sample of egg assembly plants: Distribution of number and volume handled, by size groups, 1965 and 1963 ^{1/}

Average volume assembled per week	Plant numbers		Volume handled	
	1965	1963	1965	1963
	Percent	Percent	Percent	Percent
Cases (30 dozen)				
Under 400	19.7	18.0	2.2	2.7
400-699	20.5	20.5	5.6	6.3
700-999	12.3	13.6	5.4	6.4
1,000-3,999	36.6	39.1	39.1	43.3
4,000 or more	10.9	8.8	47.7	41.3
<hr/>				
	<u>Number</u>	<u>Number</u>		
Total number of plants ..	689	795		
<hr/>				
			<u>Cases</u>	<u>Cases</u>
Total weekly volume			1,325,100	1,383,646

^{1/} Firms reporting to USDA Market News Service in connection with Commercial Egg Movement Report. Five-week average, mostly mid-April to mid-May 1963, and 5-week average, mostly March to early April 1965.

Table 6 .--Distribution of poultry slaughtered in plants under Federal inspection and volume slaughtered, by size groups, 1964 and 1962

Annual volume slaughtered	Plant numbers		Volume slaughtered	
	1964	1962	1964	1962
	Percent	Percent	Percent	Percent
1,000 pounds (live weight):				
Under 1,000	15.1	16.4	0.1	0.2
1,000-4,999	15.5	18.6	2.2	3.4
5,000-9,999	11.5	16.4	4.9	8.4
10,000-29,000	35.7	32.8	36.0	40.0
30,000 or more	22.2	15.8	56.8	48.0
<hr/>				
	<u>Number</u>	<u>Number</u>		
Total number of plants ..	482	532		
<hr/>				
			<u>Million pounds</u>	<u>Million pounds</u>
Total volume slaughtered (live weight)			8,944	8,055

Compiled from records of Poultry Division, Consumer and Marketing Service, USDA.

The number of further-processing plants under USDA poultry inspection and grading programs increased from 295 in 1960 to 452 in 1965. ^{14/} More than three-fourths of the further-processing plants do not slaughter and eviscerate. In 1964, plants using less than 100,000 pounds of ready-to-cook poultry each accounted for 49 percent of the plants and 1 percent of the volume of ready-to-cook poultry used. Plants using more than 5 million pounds each in 1964 accounted for 8 percent of the plants and 70 percent of the volume (table 7). One-fourth of the plants were located in the North Atlantic Region, but they used only 13 percent of the volume. Plants in the West North Central Region were only 16 percent of the total number, but they accounted for 33 percent of the volume of poultry used. Thus, the Midwest has more of the large plants, while there are more small plants in the other regions, particularly in the North Atlantic Region.

Poultry Wholesalers

Numbers of establishments wholesaling poultry and poultry products have been declining in recent years, but the dollar volume of sales for those remaining has been increasing. The same trends are apparent for agents and brokers. Wholesaling and jobbing firms in large cities have been increasingly by-passed as more direct movement from egg packers and poultry processors to retailers has expanded. The high cost of doing business in older city markets has been a contributing cause. Moreover, country plants are better able now to meet buyer specifications for the kinds, quantities, and qualities of egg and poultry products required than in earlier years.

Table 7 .--Distribution of numbers of plants and volume of poultry used in further-processing, by size groups, 1964

Poultry used in further-processing	Plants		Poultry used in further-processing	
	Number	Percent	Million pounds	Percent
1,000 pounds (ready-to-cook weight):				
Less than 100	218	49.1	5.8	0.9
100-499	88	19.8	19.6	3.1
500-999	41	9.2	29.6	4.7
1,000-4,999	61	13.8	132.4	21.0
5,000 or more	36	8.1	444.2	70.3
Total	444	100.0	631.6	100.0

Compiled from unpublished data of Poultry Division, Consumer and Marketing Service, USDA.

^{14/} Further-processors start with ready-to-cook birds, then cook and usually debone the meat and prepare a very large variety of canned, frozen, and dried products. Information on plant numbers was compiled from December 1960 and March 1965 issues of List of Plants Operating Under USDA Poultry and Egg Inspection and Grading Programs, Consumer and Marketing Service, USDA.

Reasons for Declining Numbers of Firms and Plants

The existence of substantial economies of scale in most processing and marketing functions is the principal reason why numbers of egg and poultry plants are declining. Economies of scale provide the major impetus toward reduced numbers of egg packing and breaking, and poultry slaughtering and eviscerating plants. In further-processing, economies of scale exist but the tendency of this force to reduce plant numbers is currently overshadowed by the rapid increase in output of further-processed products.

Increasing density of production has also been a factor tending to reduce numbers of assemblers and processors. As production density increases around local plants, the costs of assembly are reduced. Combined assembly and processing costs are then minimized by employing fewer and larger plants.

The achievement of technological feasibility in consumer grading and cartoning of eggs at country points has caused this function to move rapidly from city to country points. For all practical purposes, this migration was completed for poultry processing some years earlier. Because of reduced assembly costs, larger plant sizes then became more feasible at country points.

The increasing coordination of input-supplying, producing, and marketing functions under common management has also tended to reduce firm and plant numbers. Under such arrangements more effective use can be made of managerial resources. Moreover, development of steady and regular outlets for chicks and feed facilitates achievements of economies of scale and better utilization of capacity in hatchery and feed operations.

Another factor which tends to reduce numbers of firms is the development of more direct marketing channels. Both direct buying at country points by retailers and direct delivery to retailers' warehouses or stores by firms from outside the immediate area result in the elimination of functions previously performed by local wholesale firms.

Future Trends

A continuation of current trends is indicated for the future. As a result of an even higher degree of coordination of production and marketing functions, there is likely to be increased price stability, the production of standardized products for specific markets, a further lowering of costs, and growing importance of multi-plant and multi-function firms.

Realization of economies of scale and better utilization of plant capacity will further reduce processing costs and result in larger sized units and fewer plants than at present. Production density will be increased so that assembly costs will also be reduced.

Gradual growth is indicated for further-processed poultry and egg products. These may be produced to a greater extent than now in new departments of poultry slaughtering and shell egg packing plants. However, because of the importance of distributing costs, many separate and market-oriented plants will continue to produce these items.

Grains Used for Food 15/

Many of the industries involved in marketing grain for domestic food uses are also involved in merchandising and processing grains for feed and industrial uses. Some of these industries also export grain and grain products. Thus, changes in the structure of some of the food grain industries are influenced by total grain production and marketing--both for domestic and foreign uses.

From 1947 to 1963, the total number of establishments specializing in the marketing of grains for human consumption decreased sharply. Most of this reduction in number occurred in 2 industries--flour milling and baking.

These changes were closely associated with changes in domestic consumption habits. Per capita consumption of rice and wet-corn processed products increased considerably from 1947 to 1963. Per capita consumption of rye, barley, and dry-corn products declined during the period. Per capita consumption of wheat products decreased from 1947 to 1962 but has since shown some tendency to level off.

Between 1947 and 1954, decreases in per capita consumption were about offset by increases in population growth. In more recent years per capita consumption remained about steady, and total consumption increased at about the same rate as population.

Grain Elevators

The number of country elevators decreased sharply from 1947 to 1954 but increased from 1954 to 1963 (table 8). The number of terminal elevators increased 50 percent from 1954 to 1958 but decreased slightly between the latter year and 1963. The growth in elevator numbers was related more to the production of grains than to the domestic consumption of food grains. It took place during the period of increasing grain stocks. Many subterminal elevators were built during this period.

Table 8.--Grain elevators and establishments manufacturing flour and meal:
Number and type, 1963, 1958, 1954, and 1947

Type	1963	1958	1954	1947
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Elevators:				
Country	7,653	7,000	6,580	<u>1/8,161</u>
Terminal	633	690	460	---
Flour and meal:				
Wheat flour	306	346	371	---
Corn meal	95	147	127	---
Prepared flour mixes ..	33	81	58	---
Products n.e.c.	184	240	247	---

1/ Number for 1948.

Compiled from Census of Business--Wholesale Trade and Census of Manufactures.

15/ Prepared by Walter G. Heid, Jr., agricultural economist.

During this period the utilization of grain storage capacity decreased sharply as well as profit rates of many elevators.

Food Grain Processing Establishments

The number of plants producing flour and meal decreased by nearly 50 percent from 1947 to 1963 (table 9). Decreases were reported in all sectors of the industry (table 8). Most, but not all, of the establishments and companies that left this industry were small. With some growth reported by medium-sized flour milling companies and the closing of a few large mills, concentration in the industry, nationally, was less in 1963 than in 1947.

Output increased at a slower rate in the flour and meal industry than in most food grain industries (table 10). This rate of growth was associated with the continued decline in per capita consumption of wheat flour through 1962 and a leveling off in more recent years. Nevertheless, in recent years the utilization of flour milling capacity increased considerably, reaching about 93 percent in 1963.

The cereal preparations, rice milling, and wet-corn processing industries also had fewer establishment numbers in 1963 than in 1947 (table 9). However, each of these industries showed increases in establishment numbers from 1958 to 1963. These increases were associated with increases in per capita consumption of these products.

Establishments in the blended and prepared flour industry showed a substantial increase from 1958 to 1963, even without considering those gains resulting from changes in industry specification for the 1963 census.

Bakery Products, Macaroni and Spaghetti

Both establishment and company numbers declined sharply in the bread and related products industry from 1947 to 1963. All of the reduction in establishments occurred in the group employing fewer than 100 employees. All types of establishments declined in number from 1958 to 1963 except multi-unit bakeries (table 11). Grocery chain and home service bakeries declined after increasing in the period 1954-58. The number of retail bakeries also declined.

In the biscuit and cracker industry, both the number of establishments and companies increased from 1958 to 1963. In the macaroni and spaghetti industry, the number fluctuated from 1 census year to another.

Outlook

In recent years, the U.S. per capita consumption of grain products has about leveled off and total consumption has increased. Structural changes in the food grain industries from 1947 to 1958 resulted in fewer but larger establishments and companies. Since 1958, the number of establishments and companies in the milling and baking industries has continued to decline. In most of the other grain product industries, the number of establishments has increased slightly since 1958, and in some the number of companies has increased. In general, the changes from 1947 to 1963 resulted in increased output per establishment.

As many of the food grain industries grow in number of establishments as well as in average size, these industries may be expected to become more competitive. These adjustments should, in the long run, result in greater efficiencies in the food grain industries.

Table 9.--Food manufacturing industries: Number of companies and establishments, 1963, 1958, 1954, and 1947 ^{1/}

Industry	Companies				Establishments			
	1963	1958	1954	1947	1963	1958	1954	1947
	No.	No.	No.	No.	No.	No.	No.	No.
Grain mill products:								
Flour and meal	510	703	692	1,047	618	814	803	1,243
Cereal preparations	35	33	37	55	48	43	46	64
Rice milling	62	61	65	75	74	72	80	88
Blended and prepared flour ^{2/} ...	140	112	123	115	165	117	131	123
Wet corn milling	49	53	54	47	60	59	58	55
Bakery products:								
Bread and related products ^{3/} ...	4,339	5,304	5,470	5,985	5,010	6,026	6,103	6,796
Biscuits and crackers	286	285	---	---	356	339	311	326
Macaroni and spaghetti	207	205	226	219	221	214	233	226
Canning, preserving, and freezing:								
Canned fruits and vegetables	1,135	1,315	1,461	---	1,430	1,630	1,758	2,265
Dehydrated fruits and vegetables :	126	130	119	120	176	161	148	146
Pickles and sauces ^{4/}	541	566	642	637	588	619	717	742
Frozen fruits and vegetables	566	347	215	---	650	426	266	291
Canned specialties ^{5/}	154	93	---	---	173	107	---	---
Fats and oils:								
Cottonseed oil mills	115	125	145	172	188	214	286	315
Soybean oil mills	68	82	55	105	101	117	88	133
Shortening and cooking oils ^{6/} ..	65	62	---	---	112	105	135	127

^{1/} For some industries data for 1963 and 1958 are not strictly comparable with those for 1954 and 1947. Because of changes in industry definitions used for the 1958 and 1963 censuses, some industries include plants previously excluded and some industries exclude plants previously included. The tabulation below shows 1958 data for establishments classified according to the industrial classification system used for the 1954 census; data are shown only for those industries for which changes in industry definitions caused significant differences:

Industry	Establishments
Biscuits and crackers	304
Canned fruits and vegetables	1,675
Pickles and sauces	705
Frozen fruits and vegetables	303

Totals for 1963 and 1958 include Alaska and Hawaii except where inclusion would result in a disclosure.

^{2/} The blended and prepared flour industry includes flour mixes such as cake, biscuit, doughnut and pancake mixes and, for the 1963 census, refrigerated doughs. Thus, data for 1963 are not strictly comparable with those for the previous years. Establishments in 1963 classified according to 1958 definitions numbered 144.

^{3/} A review of the 1958 data by the Bureau of the Census indicated that 846 small, single-shop retail bakeries were incorrectly included as wholesale bakeries in the 1958 census. The 1954 census is subject to a similar error.

^{4/} Includes plants manufacturing pickled fruits and vegetables, vegetable sauces and seasonings, and salad dressings.

^{5/} Includes baby foods, soups (except seafood soups), "native foods," health foods, and other canned specialties.

^{6/} Includes data for margarine.

Compiled from Census of Manufactures, 1963, 1958, 1954, and 1947.

Table 10.--Indexes of production of primary products shipped by producers,
1963, 1958, and 1954
(1954=100)

Product	Production		
	1963	1958	1954
Grain mill products:			
Flour mill products	128	111	100
Wheat flour, except flour mixes	122	108	100
Corn meal (for human and animal use)	149	130	100
Grain mill products, n.e.c.	178	109	100
Cereal breakfast foods	148	114	100
Milled rice and byproducts	158	104	100
Blended and prepared flour	152	117	100
Wet corn milling (including starch)	133	115	100
Bakery products:			
Bread and related products ..	114	109	100
Biscuits, crackers, and cookies	132	114	100
Macaroni and spaghetti	126	110	100
Canned and frozen foods:			
Canned fruits and vegetables, preserves, jams and jellies	139	120	100
Pickled fruits and vegetables: sauces, and salad dressing	145	116	100
Frozen fruits, juices, vegetables, and specialties ...	252	162	100
Fats and oils:			
Cottonseed oil mills	96	79	100
Soybean oil mills	204	156	100
Shortening and cooking oils ..	135	110	100

Compiled from the Census of Manufactures, 1963.

Table 11.--Establishments baking bread and related products: Number and type, 1963, 1958, 1954, and 1947

Types	1963	1958	1954	1947
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Manufacturing bakeries:				
Wholesale	4,287	5,240	5,426	---
Grocery chain	153	178	142	---
Home service	281	361	217	---
Multi-unit	289	247	318	---
Total	5,010	6,026	6,103	6,796
Retail bakeries <u>1</u> /.....	18,631	19,235	19,304	<u>2</u> /19,500

1/ Includes establishments primarily selling bakery products over the counter. Manufacturing retail bakeries bake some or all of the products they sell; nonmanufacturing retail bakeries do not bake any of the products they sell.

2/ Number for 1948.

Compiled from Census of Manufactures and Census of Business--Retail Trade.

Fruits and Vegetables 16/

Processing

Changes in the fruit and vegetable processing industries have been very dynamic during the past 2 decades. The number of establishments canning fruits and vegetables in the United States has declined more than a third and those packing pickles and sauces have declined about a fifth. In contrast, the number of establishments in the frozen fruit and vegetable industry has more than doubled. The number of establishments dehydrating fruits and vegetables has risen 21 percent. The number of companies in these industries also changed in about the same proportion as the number of establishments (table 9).

Output of the canned fruit and vegetable industry increased by 39 percent from 1954 to 1963 (table 10). The production of pickled fruits and vegetables, sauces and salad dressings increased by 45 percent during this time. The largest relative increase was for the frozen fruit and vegetable and specialty products. Output of these products in 1963 was 152 percent above the 1954 level.

The change to fewer but larger firms in the fruit and vegetable canning industry is the same type of structural change that is taking place throughout most agricultural production and marketing industries. Almost all of the decrease in canning establishments has been in the relatively small firms--those employing fewer than 100 employees.

The larger firms sell a higher proportion of their pack under packer brands than under customer brands. 17/ In contrast, the smaller firms sell a higher proportion of their pack under customer brands.

16/ Prepared by Loyd C. Martin, agricultural economist.

17/ Economic Inquiry into Food Marketing, Federal Trade Commission, June 1965.

According to a Federal Trade Commission study, the 4 largest processors of 4 canned fruits accounted for more than half the total production of these products in 1959. For canned vegetables, the 4 largest producers accounted for over one-half of the total production of sweet corn, green peas, and tomato catsup. The 4 largest producers of canned juices accounted for about 90 percent of the packs of grape juice and prune juice and about one-half of the output of tomato juice and orange juice. These leading producers likely have increased their share of the market for canned fruits and vegetables since 1959.

Processed products continue to make up an increasing part of fruit and vegetable consumption. Most of the increase in use of processed products is at the expense of fresh fruits and vegetables. Increases in consumption of processed fruits and vegetables are expected to continue--especially for frozen and specialty products. This shift will be affected to some extent by changes in the relative prices of processed and fresh fruits and vegetables. Increases in the number of employed home-makers--coupled with increasing disposable income--are factors associated with the increase in fruits and vegetables consumed in the processed form. The high demand for convenience and prepared foods and the development of new and improved products also are important factors. New technologies such as frozen concentrate, dehydro-freezing and freeze drying, together with foammat and vacuum-puff methods of drying, show promise for stimulating the consumption of processed fruits and vegetables.

In the future, food processors are expected to continue diversifying their operations. Diversification would utilize the new technologies. There will be a continuation of the trend to fewer and larger firms in the fruit and vegetable processing industry. Several important factors pressing toward larger firms in the fruit and vegetable processing industry are the large investment required for plant and equipment, for operating capital, for adopting new technology, and for the development of new and improved products, and also the shortages of experienced management and plant labor.

Wholesaling

Assemblers.--The number of establishments assembling fresh fruits and vegetables in production areas has changed very little since 1948 (table 12). However, their total sales have increased about 38 percent and sales per establishment also increased.

Wholesalers.--The number of establishments operated by merchant wholesalers of fresh fruits and vegetables has declined by more than 16 percent since 1948 (table 12). This decline has been accompanied by a decrease of about 6 percent in their total sales. During this same time, establishments of agents and brokers selling fresh fruits and vegetables increased by about 35 percent in number and by over 60 percent in total sales.

According to Manchester's study, approximately 5,100 wholesalers left the produce business from 1939 to 1958. ^{18/} During this same time, 3,700 firms entered the business. This survey also found that the largest increases in sales were reported by wholesale firms which were providing specialized services to their customers, such as prepackaging and tomato ripening and repacking. These successful wholesalers also found that more and more of their sales volume was coming from supplying specialized demands of retail organizations and institutional outlets rather than from sales of fruits and vegetables as prepared for market in the production area. Many traditional merchant wholesalers of fruits and vegetables for fresh market were by-passed in the increased direct purchasing by large food chains and affiliated wholesalers. Another change in wholesaling fruits and vegetables has been the decline in auction selling.

^{18/} The Structure of Wholesale Produce Markets, Alden C. Manchester, Agricultural Economic Report No. 45, USDA, April 1964.

Table 12.--Fresh fruits and vegetables wholesalers: Number of establishments, total sales, and average sales per establishment, 1963, 1958, 1954, and 1948

Year	Merchant wholesalers	Agents, brokers	Assemblers of farm products
	<u>No.</u>	<u>No.</u>	<u>No.</u>
Establishments:			
1963	5,123	1,085	2,106
1958	6,291	986	2,277
1954	6,520	893	1,993
1948	6,127	805	2,032
	<u>Mil. dol.</u>	<u>Mil. dol.</u>	<u>Mil. dol.</u>
Sales:			
1963	2,981	2,088	1,505
1958	3,092	1,877	1,453
1954	3,262	1,591	1,288
1948	3,170	1,295	1,087
	<u>Thou. dol.</u>	<u>Thou. dol.</u>	<u>Thou. dol.</u>
Average sales per establishment:			
1963	582	1,924	715
1958	491	1,904	638
1954	500	1,782	646
1948	517	1,609	535

Compiled from Census of Business--Wholesale Trade.

Terminal auction companies now operate 6 auctions in 6 cities compared with 20 auctions in 14 cities in 1931. The volume of citrus and Western deciduous fruits handled by auctions in the markets where they are located has declined about 50 percent during this period. In 1962-63, auctions sold about 45 percent of the citrus fruit and 38 percent of the Western deciduous fruit received in the markets where they are located. Auctions are becoming more important as specialty distributors rather than as mass distributors of fresh fruits and vegetables. Again, direct purchasing by large retailers has been a factor affecting auction sales.

Direct purchasing by retail food chains and warehouses affiliated with retail groups from shipping point sources increased from 12 percent of receipts in major wholesale markets in 1936 to 26 percent in 1958. Some further modest increases can be anticipated as more chains become large enough to buy direct from shipping points and more affiliated wholesalers add produce to their merchandise lines. Wholesalers located in the terminal market areas will sell mainly to 3 groups of buyers of fresh fruits and vegetables. These groups are: (1) The specialized wholesalers supplying outlets such as restaurants, hotels and institutional buyers, most of which have demands not suited for supplying directly from shipping points; (2) unaffiliated independent retail grocery stores; and (3) large retailers who buy fill-in supplies when their estimates of needed supplies have been short and also certain specialty items and prepackaged items.

The relocation of wholesale produce markets in some cities from their downtown locations to modern food distribution centers will assist wholesalers to strengthen their role in the marketing of fresh fruits and vegetables.

Oilseeds and Vegetable Oils 19/

Marketing of oilseeds and vegetable oils has been influenced by many of the forces for change that have affected the marketing of other farm products over the past 2 decades. Changes in these industries have been affected by large increases in production and by the shift of the United States from a net importer to a net exporter. The industry has undergone changes in organization and structure in processing methods and techniques; and in the size, type, and number of mills processing the various oilseeds. Changes have occurred in the utilization of these oils in domestic and foreign outlets, particularly, following World War II.

Although total per capita consumption of fats and oils has changed only slightly, per capita use of vegetable oils in margarine, shortening, and cooking and salad oils about doubled from the mid-1940s to the mid-1960s. These tendencies are expected to continue during the next few years.

Soybean oil and cottonseed oil are the 2 major vegetable oils produced in the United States, accounting for about 90 percent of total production. Both are used primarily in the production of edible commodities. Until the early 1950s, cottonseed was the major source of the domestic supply of vegetable oil. However, by the mid-1960s, soybeans was contributing two-thirds or more of the domestic supply of vegetable oils. Soybean oil will make an even greater contribution to the domestic supply of edible oils in the next few years, filling the gap created by declining availabilities of other food fats and oils. Industries manufacturing shortening, cooking oils, and margarine are the principal users of soybean and cottonseed oils.

The volume of soybeans crushed and the production of crude soybean oil both more than tripled from 1947 to 1965. The volume of cottonseed crushed increased 45 percent and the production of cottonseed oil increased 57 percent, although changes were small in recent years. A decline in cottonseed production is anticipated in the 1966 crop year as a result of a decrease in cotton acreage under the new program. Production of shortening and cooking oils increased 35 percent from 1954 to 1963 (table 10).

Decrease in Number of Establishments

The number of processing establishments decreased, and size of establishments increased between 1947 and 1963. New and more efficient machinery and equipment was introduced resulting in more efficient operations and increased oil yield. Some of these changes occurred both at the first level of vegetable oil processing, (soybean and cottonseed oil extraction plants), and in the final stages in which vegetable oils are changed into consumer products. Innovations in machinery and other equipment and in processing techniques are expected to continue as these industries progress along with an expanding national economy.

Among the cottonseed processors, number of establishments decreased 40 percent from 1947 to 1963 (table 9). The average size of plant, as reflected by average value of shipments, increased 80 percent. Average value added to products manufactured increased 65 percent, according to the Census of Manufactures.

Striking technological developments occurred during this period in the oil extraction equipment used for processing cottonseed. There was a strong shift from

19/ Prepared by Thomas B. Smith, agricultural economist.

the hydraulic method of extracting oil to the more efficient screw press and solvent methods. In the early 1950s, 57 percent of the cottonseed crushed was processed by the hydraulic method compared with 32 percent by screw press and 12 percent by solvent methods. In 1963, only 9 percent was processed by the hydraulic method; 48 percent by screw press, and 43 percent by solvent methods. Adoption of more efficient oil extraction methods is expected to continue in the future.

The number of soybean oil mills decreased 24 percent from 1947 to 1963 (table 9). Average size, based on average value of shipments per plant was more than 3 times greater in 1963 than in 1947, and average value added to products produced was almost double that in 1947. Soybean processing firms are expected to increase the size of their plants and to improve processing methods and operating efficiency to meet the challenge of increases in bean production and expanding demand for soybean oil and meal in the domestic and export markets. The soybean processing industry experienced an almost complete shift from mechanical to solvent oil extraction methods during the past 2 decades. Twenty years ago, 5 percent of the beans were processed by the hydraulic method, 74 percent by the screw press method, and 20 percent by the solvent methods. In 1963, direct solvent extraction plants accounted for 94 percent of the total rated 24 hour capacity of soybeans processing plants. This shift in method of oil extraction was accompanied by decreasing number and increasing size of soybean processing plants and increased oil yields.

Similar changes occurred among manufacturers of shortening and cooking oils and of margarine, processors of vegetable oils into consumer products. Number of establishments manufacturing these products decreased 12 percent from 1947 to 1963. The average value of shipments increased 33 percent and the average value added to products manufactured increased 41 percent.

Other important technological developments introduced during the post World War period are the hydrogenation of oils, improved refining methods, deodorizing, and plasticizing. These developments made possible wider food uses of these oils.

Increase in Average Size of Plant

Most of the oilseed crushing mills and establishments manufacturing vegetable oil products that were closed were small and the new plants opened generally were larger. This is shown by changes in the number of establishments in the various employment-size groups. During the 1947-63 period, the number of establishments employing fewer than 20 employees dropped 47 percent, those employing from 20 to 99 increased 5 percent, those employing 100 to 499 increased 30 percent, and those employing 500 or more increased 100 percent. The soybean oil and cottonseed oil industries show similar changes. Similar changes are expected in the future.

A soybean oil extraction plant may now be expected to crush 3 times as many beans, on the average, as it did in 1947. The average value of product shipments has more than tripled, and the average value added to products shipped has almost doubled. The average crush per mill probably will continue to increase, keeping pace with the expected growth in bean production as new mills take a large share of the total crush.

Cottonseed oil mills have likewise grown larger in the past 2 decades. The average annual crush of a cottonseed oil mill is now twice as large as it was 20 years ago; average value of product shipments are more than three-fourths larger and the average value added to the products by manufacturers are more than two-thirds larger.

The trend toward fewer but larger establishments is expected to continue as managements strive to increase efficiency and reduce operating costs through the installation of new and improved machinery and equipment, and the application of new and more efficient operating methods and techniques.

Change in Number of Companies

Increasing industry concentration is indicated through the strong trend towards fewer controlling companies. Companies processing soybeans decreased 35 percent in number from 1947 to 1963. Companies processing cottonseed dropped 33 percent during this period (table 9). Many smaller or less efficient companies probably will merge with larger companies.

Outlook

Large quantities of soybean and cottonseed oils have been exported since World War II, and exports are expected to continue strong as the world-wide demand for fats and oils continues to rise with the rise in population.

These vegetable oils are expected to continue to make a significant contribution to special export programs. Since the beginning of the Public Law 480 program in 1954, over half of the cottonseed and soybean oils exported have moved under this program. In addition to soybean oil, soybean beverages and soybean flour in the form of consumer products may prove important as diet supplements.

Even though little change is expected in the U.S. per capita consumption of fats and oils, uses may shift among types within the next few years. Soybean oil now supplies the greatest share of the edible vegetable oils market and this will continue for some years; but other competing fats and oils such as cottonseed, corn, safflower and peanut oils and lard and edible tallow are interchangeable to a large extent in their use in the manufacture of edible products. The quantities of the different oils available and their prices will continue to be primary determinants in their use by the edible oils industry.

Changing food habits and publicity given to the so-called "polyunsaturated" fats and their alleged relationship to heart disease are among the factors which have contributed to the current and expected increase use of liquid fats in the diets of Americans.

The development and adoption of new technologies are expected to continue in the years to come as firms in the industry strive for greater efficiency in satisfying the growing world-wide demand for fats and oils products.

Grocery Wholesaling 20/

Affiliated Wholesale Establishments

Affiliated grocery establishments--those sponsoring voluntary groups of retailers and those cooperatively owned by retailers--are now the major force in the general-line grocery wholesale trade. Between 1948 and 1963, their sales increased 274 percent (table 13). Trade sources estimate that a further increase of 20 to 25 percent occurred from 1963 to 1965. 21/ Sales of retailer owned cooperative establishments grew at a faster rate; however, they started from a much smaller base in 1948. In 1963, affiliated wholesale establishments accounted for 71 percent of general-line sales, up from 38 percent in 1948. The growth of affiliated wholesalers has been due to the realization of both wholesalers and retailers that in order to compete effectively, they had to achieve the economies of scale accruing to their chain competitors.

The number of affiliated grocery establishments increased sharply between 1958 and 1963 after declining from 1948 to 1958. Voluntaries accounted for most or all of this increase. Sales per voluntary establishment almost tripled between 1948 and 1963 while sales per cooperative establishment increased 556 percent.

Sponsoring a voluntary group of retailers affords the wholesaler a relatively stable base of loyal customers. In return for this loyalty, the wholesaler provides the retailer with a merchandising and promotional program and the services of specialists in store operation. Moreover, many voluntary group sponsors provide financial assistance, accounting, store design and layout, advertising, store employee training, and many other services designed to improve retailer effectiveness. Services provided by retailer-owned cooperatives vary, but this type of operation provides the retailer dual benefits: (1) The economies resulting from purchasing in larger quantities, and (2) a share of any profits earned by the cooperative.

Non-affiliated Wholesale Establishments

In contrast to the rise of affiliated wholesale grocery establishments, sales and number of non-affiliated general-line establishments declined between 1948 and 1963. Number of establishments declined 51 percent while total sales fell 3 percent. All of these decreases occurred between 1948 and 1958. Probably a major portion of the shift in share of the market was due to non-affiliated wholesalers changing their operation and becoming sponsors of voluntary groups. From 1958 to 1963, sales and number of non-affiliated general-line grocery establishments increased slightly.

As the non-affiliated establishments' share of the market declined, the proportion of sales to various classes of customers changed. Between 1948 and 1963, their percentage of sales to institutional and industrial users, including restaurants, increased from 8 to 15 percent. However, their share of total sales made by all general-line wholesale establishments to institutional and industrial users declined. The proportion of their sales made to retailers, where affiliated competition was strongest, declined from 88 to 79 percent.

Other Types of Wholesale Establishments

From 1948 to 1963, sales of other types of grocery wholesalers increased faster than the 30 percent rise in population but considerably slower than sales of affiliated groups and less than those of food retailers and eating places.

20/ This section and the two following were prepared by Martin Leiman, marketing specialist, and Edward A. Cohn, agricultural economist.

21/ Progressive Grocer, April 1965 and 1966.

Table 13.--Wholesale grocery food trade: Number of establishments, total sales, and sales per establishment, 1963, 1958, 1954, and 1948

Type of business	Establishments				Sales				Sales per establishment			
	1963 1/	1958	1954	1948	1963 1/	1958	1954	1948	1963 1/	1958	1954	1948
	Number	Number	Number	Number	Million dollars	Million dollars	Million dollars	Million dollars	dollars	dollars	dollars	dollars
Merchant wholesalers:												
General line	2,530	2,253	3,320	4,253	11,723	8,428	7,353	5,772	4,633	3,741	2,215	1,357
Affiliated groups:	869	673	767	845	8,270	5,236	3,762	2,210	9,517	7,780	4,905	2,619
Voluntary												
groups 2/	708	---	574	634	5,357	---	2,464	1,627	7,566	---	4,293	2,566
Retail owned												
cooperative 3/	161	---	193	211	2,913	---	1,298	582	18,093	---	6,725	2,758
Non-affiliated	1,661	1,580	2,553	3,408	3,453	3,193	3,592	3,562	2,078	2,021	1,407	1,045
Cash and carry	---	371	291	404	---	190	140	146	---	512	481	363
Other	---	1,209	2,262	3,004	---	3,003	3,452	3,416	---	2,484	1,526	1,140
Specialty line	9,923	10,279	8,849	7,154	6,273	5,783	5,107	3,077	632	563	577	430
Confectionery	2,084	2,113	1,909	1,696	858	747	527	358	412	354	276	211
Other groceries												
and related												
products 4/	7,839	8,166	6,940	5,458	5,415	5,036	4,580	2,719	691	617	660	498
Agents, brokers	2,865	3,000	2,852	2,510	8,876	7,342	7,100	4,608	3,098	2,447	2,489	1,836
Confectionery	233	210	174	109	298	266	193	90	1,279	1,267	1,109	1,211
Other groceries 4/	2,632	2,790	2,678	2,401	8,578	7,076	6,907	4,518	3,259	2,536	2,579	1,882
Manufacturers' sales												
branches and												
offices	2,579	2,270	2,605	2,744	7,794	6,505	5,379	4,881	3,022	2,866	2,065	1,779
Confectionery	239	131	132	151	596	357	333	425	2,494	2,725	2,523	2,815
Other groceries 4/	2,340	2,139	2,473	2,593	7,198	6,148	5,046	4,456	3,076	2,874	2,040	1,718

1/ 1963 includes Alaska and Hawaii, accounting for 22 general line establishments with \$43 million sales, 87 special line establishments with approximately \$33 million sales and 38 agents, brokers and manufacturers sales establishments with approximately \$47 million sales. Sales for 8 specialty line and for 1 agent, broker and manufacturers' sales establishment are not available separately. Total 1963 sales for these 9 establishments were \$2.4 million.

2/ Wholesale establishments sponsoring grocery stores.

3/ Wholesale establishments cooperatively owned by groups of grocery stores.

4/ Among products included are bakery goods, canned foods, frozen foods, coffee, tea, spices and soft drinks. Excluded are confectionery, dairy, poultry and meat products.

Compiled from Census of Business--Wholesale Trade, 1963, 1958, 1954 and 1948.

Specialty-line wholesalers doubled their sales between 1948 and 1963. Agents and brokers almost doubled their sales. Manufacturers' sales branches also increased theirs, but only by 60 percent.

The number of establishments of specialty-line wholesalers and agents and brokers declined from 1958 to 1963 following increases from 1948 to 1958. The number of manufacturers' sales branches increased in the 1958-63 period after declining in earlier years.

Retail Food Stores

Grocery Stores

There were 32 percent fewer grocery stores in the United States in 1963 than in 1948 (table 14). Most of this decrease was in stores operated by single-unit firms. From 1948 to 1954, the number of grocery stores decreased sharply as many single-unit establishments closed, and multi-unit firms closed their smaller and older stores. From 1954 to 1958, single-unit establishments continued to decline in number but at a slower rate, and there was a slight increase in the number of multi-unit establishments. From 1958 to 1963, single units continued to decline at a slower rate, while the number of multi-units increased by 19 percent. Stores operated by firms with 101 or more units accounted for almost three-fifths of this increase. These stores accounted for 53 percent of all multi-unit grocery stores in 1963.

The number of multi-unit firms increased between 1948 and 1963 (table 15). Firms operating 51 or more stores led the increase.

Average sales per grocery store more than tripled between 1948 and 1963, while retail store prices of food increased 16 percent. Stores operated by firms with 51-100 units led this increase but average sales of all grocery stores, including single units, grew rapidly. Average sales per grocery store increased an estimated 14 percent between 1963 and 1965.

Two important developments in food retailing accompanied the increase in sales per grocery store: (1) The shift in sales from single-unit firms to multi-unit firms and (2) the emergence of the supermarket.

In 1948, single-unit establishments averaging only \$42,000 in annual sales, did 59 percent of the grocery business. In 1963, however, multi-units made 57 percent of grocery store sales as shown below:

<u>Year</u>	<u>Single units</u>	<u>Multi-units</u>
	<u>Percent</u>	<u>Percent</u>
1963	43.1	56.9
1958	47.0	53.0
1954	51.8	48.2
1948	58.7	41.3

As the multi-unit firms increased their share of total grocery store sales, each multi-unit size category--in terms of number of stores operated--increased its share (table 15). Firms operating 51 or more stores increased their market share from 29 to 40 percent.

Despite this increasing share of total grocery sales, each multi-unit category's share of multi-unit sales remained fairly constant between 1948 and 1963. This means

Table 14.--Retail food stores: Number, total sales, and sales per store by kind and number of units per firm, 1963, 1958, 1954, and 1948 ^{1/}

Kind of store and number of units	Stores			
	1963	1958	1954	1948
	Number	Number	Number	Number
Grocery stores:				
Single units	215,129	234,901	254,805	347,063
2 or 3 units	5,631	4,960	5,559	5,829
4-10 units	2,789	2,312	2,171	2,497
11-50 units	3,519	3,198	3,460	3,559
51-100	2,065	1,566	1,141	1,525
101 or more units	15,705	12,859	12,304	17,466
Total	244,838	259,796	287,572	358,671
Other food stores	74,595	96,958	97,044	102,242
Total	319,433	356,754	384,616	460,913
	Sales			
	Million dollars	Million dollars	Million dollars	Million dollars
Grocery stores:				
Single units	22,677	20,557	17,838	14,552
2 or 3 units	2,630	2,084	1,664	899
4-10 units	2,538	1,843	1,366	787
11-50 units	3,850	3,358	2,598	1,371
51-100 units	2,752	1,750	818	372
101 or more units	18,119	14,105	10,136	6,788
Total	52,566	43,696	34,901	25,038
Other food stores	4,513	5,529	4,861	4,170
Total	57,079	49,225	39,762	29,208
	Sales per store ^{2/}			
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars
Grocery stores:				
Single units	105	88	70	42
2 or 3 units	467	420	299	154
4-10 units	910	797	629	315
11-50 units	1,094	1,050	751	385
51-100 units	1,333	1,118	717	244
101 or more units	1,154	1,097	824	389
Grocery stores avg. .	215	168	121	70
Other food stores	61	57	50	41
Food stores avg. .	179	138	103	63

^{1/} The 1963 classification of grocery stores includes some establishments classified as general stores in previous years. The number of these stores is not available. Except for this change, totals for the 4 census years are comparable, but data for single and multi-units are not strictly comparable. Delicatessen stores are included in all data for 1963 and 1958 but only in the totals for 1954 and 1948. Further, the 1963, 1958, and 1954 censuses excluded establishments that had no paid employees and sales of less than \$2,500 a year but the census for 1948 included all establishments that had a sales volume of \$500 or more provided they operated the entire year. The totals for 1948 are based on the 1963, 1958, and 1954 definition of establishment but the detailed data are not. Because of these differences in coverage, some of the data for single and multi-units do not add to totals. Delicatessen stores numbered 8,132 in 1954 and 7,917 in 1948.

^{2/} Computed from sales in thousands of dollars.

Compiled from Census of Business--Retail Trade, 1963, 1958, 1954 and 1948.

Table 15.--Multi-unit grocery firms: Number, and percentages of total and multi-unit sales, by number of units per firm, 1963, 1958, 1954, and 1948

Number of units	Multi-unit firms			
	1963 <u>1/</u>	1958 <u>2/</u>	1954 <u>2/</u>	1948 <u>2/</u>
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
2-5	3,009	2,756	2,729	2,700
6-10	219	218	198	209
11-50	194	176	224	177
51 or more	64	39	37	33
Total	3,486	3,189	3,188	3,119
	Sales of all grocery stores <u>3/</u>			
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
2-5	6.9	6.6	6.4	4.9
6-10	2.9	2.4	2.8	1.9
11-50	7.3	7.7	7.5	5.5
51 or more	39.7	36.2	31.8	28.9
Total	56.9	53.0	48.2	41.3
	Sales of multi-units <u>3/</u>			
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
2-5	12.1	12.5	13.3	11.9
6-10	5.1	4.5	5.0	4.6
11-50	12.9	14.5	15.7	13.4
51 or more	69.9	68.5	66.0	70.1
Total	100.0	100.0	100.0	100.0

1/ Number of firms, 1963, and sales, all years, from Census of Business--Retail Trade.

2/ Number of firms, 1958, 1954, and 1948 estimated by Progressive Grocer based on data in "Chain Store Guide".

3/ Sales percentages were computed from data in Census of Business--Retail Trade, 1963, 1958, 1954, and 1948. These data for 1954 and 1948 did not include delicatessen sales. Because of the small sales volume of such stores, their exclusion does not materially effect the results.

that small multi-unit firms, with 2 to 10 stores, maintained their share of the market. However, between 1963 and 1965, trade sources estimate a 10-percent increase in the number of grocery stores operated by all multi-unit firms, compared with a 3-percent increase in number of stores owned by firms operating only 2 or 3 stores. 22/

Supermarket Institute, a trade organization, currently defines a supermarket as a retail food store having annual sales of \$1,000,000 or more with at least the grocery department self service. 23/ The number of establishments with a sales volume of \$1,000,000 or more a year increased 6-fold between 1948 and 1963 (table 16). Their sales increased more than 8-fold.

Increases in sales and number of stores with \$1,000,000 or more in sales far outstripped those of any other size of store. Number and sales of stores with less than \$100,000 annual sales declined sharply. Number and sales of stores in all other sales size categories increased; the larger the size category, the greater the increase.

In 1963, stores with annual sales of \$1,000,000 or more represented only 7 percent of the establishments but accounted for 53 percent of the sales, 52 percent of the paid employees, and 58 percent of the payroll for grocery stores. Trade sources estimate that openings of supermarkets increased from 1963 to 1965. 24/ The majority of these supermarkets are owned by firms with 101 or more establishments. However, single-establishment firms operated 17 percent of them in 1963, up from 13 percent in 1954. This indicates the strength of large independent retailers.

Corporations owned roughly nine-tenths of the grocery stores with annual sales of \$1,000,000 or more in 1963, about the same as in 1958 (table 17). In contrast, individual proprietors owned nine-tenths of all stores with less than \$100,000 in annual sales. Since large stores increased while small stores declined in number between 1948 and 1963, grocery stores operated by corporations increased and those operated by individual proprietors declined.

Affiliated grocery stores.--The growth of affiliated grocery stores has accompanied the growth of affiliated wholesalers discussed above. Most of these affiliated stores are operated by retail firms with fewer than 11 stores. According to trade sources, these stores increased their share of grocery store sales from 36 percent in 1954 to 49 percent in 1965. 25/ Sales of stores operated by firms with 11 or more stores also increased their market share. However, the proportion of total sales made by non-affiliated firms with fewer than 11 stores declined rapidly. In 1965, they accounted for only 9 percent of all grocery store sales.

The size of affiliated stores has been growing rapidly in recent years. Affiliated stores with sales of \$500,000 or more per year accounted for well over three-fifths of total sales by affiliated grocery stores in 1965.

Convenience stores.--A relatively new, but fast growing, type of food store has appeared on the retail scene. As their name implies, the appeal of these small stores is based upon convenience--drive-in parking, open long hours, 7 days a week, and a limited but complete line of food.

The 5,900 convenience stores in operation in 1965 represent a 53-percent increase since 1961. 26/ In 1965, these stores, with an average sales size about \$175,000

22/ Directory of Supermarket and Grocer Chains (New York: Business Guides, Inc., 1963 and 1965 editions).

23/ Other trade sources define the supermarket as a store with \$500,000 or \$375,000 annual sales.

24/ Progressive Grocer, April 1966, p. 150.

25/ Progressive Grocer, April 1966, p. 155.

26/ Progressive Grocer, April 1966, p. 67.

Table 16.--Grocery stores: Number and total sales, by sales-size of stores, 1963, 1958, 1954, and 1948 ^{1/}

Annual sales per store	Stores ^{2/}				Change : 1963 from 1948
	1963	1958	1954	1948	
Thousand dollars	Number	Number	Number	Number	Percent
Less than 100	148,714	175,581	204,880	276,511	-46
100-299	38,998	39,422	40,398	36,222	8
300-499	9,123	8,369	7,711	6,197	47
500-999	11,143	9,092	7,507	5,360	108
1,000 or more	14,464	10,332	6,242	1,911	657
Total	222,442	242,796	266,738	326,201	-32

Sales ^{2/}				Percent
Million dollars	Million dollars	Million dollars	Million dollars	
Less than 100	5,617	6,290	7,381	-34
100-299	6,480	6,463	6,523	12
300-499	3,506	3,227	2,978	47
500-999	8,055	6,445	5,294	119
1,000 or more	26,405	18,757	10,723	858
Total	50,063	41,183	32,899	116

^{1/} Data are not strictly comparable because 1963 and 1958 include delicatessens and the 1948 definition of establishment includes more small stores than do later definitions. (See footnote 1 to table 14.)

^{2/} Includes only stores operated the entire year.

Compiled from Census of Business--Retail Trade, 1963, 1958, 1954, and 1948.

Table 17.--Grocery stores: Number and total sales, by legal form of organization and sales size group, 1963 ^{1/}

Annual sales per store	Stores ^{2/}			
	Individual proprietorship	Partnerships	Cooperatives and others	Corporations
Thousand dollars:	Number	Number	Number	Number
Less than 100 ...:	133,067	12,406	283	2,958
100-299	24,367	8,286	190	6,155
300-499	3,813	1,958	51	3,301
500-999	1,906	1,328	52	7,857
1,000 or more ...:	383	485	73	13,523
Total	163,536	24,463	649	33,794
	Sales ^{2/}			
	Million dollars	Million dollars	Million dollars	Million dollars
Less than 100 ...:	4,813	608	13	182
100-299	3,913	1,416	33	1,118
300-499	1,435	3/	3/	1,305
500-999	1,267	910	36	5,843
1,000 or more ...:	567	3/	3/	24,914
Total	11,994	4,474	232	33,362

^{1/} Includes delicatessens

^{2/} Stores operated entire year.

^{3/} Not revealed because of Census disclosure rules.

Compiled from Census of Business--Retail Trade, 1963

annually, did between 1 and 2 percent of the U.S. retail grocery store business. This type of store began and still is most prevalent in the South but has expanded widely into the East and has made some inroads in the West and North.

Ownership of convenience stores is highly concentrated. The leading firm operated almost a fourth of all convenience stores in 1964. Firms with 10 or more stores controlled 70 percent of all such stores in the same year. ^{27/}

This type of store has been successful in suburban and edge-of-city areas particularly but also in center-city areas. Their success is based upon consumer willingness to pay higher retail prices for convenience of location, quick service, and availability of merchandise when supermarkets are closed. Average amount of individual purchases is only around \$1. The extent to which consumers are willing to pay higher prices for convenience--that is, to purchase retail services--will be a primary factor in determining the market potential of convenience stores.

^{27/} Progressive Grocer, April 1965, p. 222.

Discount Stores

Trade sources estimate that supermarkets associated with discount houses had total sales of \$2.8 billion in 1965, up from \$410 million in 1960. These stores accounted for 4.5 percent of total retail food store sales in 1964. One in 3 discount houses has a food department. About half are leased departments.

Many stores calling themselves discount supermarkets are physically separated from and not associated with a general merchandise discount store. These supermarkets differ from conventional supermarkets in that they are physically larger, may carry a limited line consisting mainly of fast turnover items, and if operated by a chain, use a different store name. These discount supers may also charge lower prices and give reduced consumer services. According to one source, 1 out of every 10 new supermarkets opened in 1965 was believed to have been a discount supermarket. 28/

Acquisitions

From 1959-64, retail grocery companies acquired 1,634 grocery establishments with an estimated \$2,046 million in sales. 29/ This represents a slight decline from the unusually strong merger activity of 1955-58. 30/ However, trade sources report a sharp increase in number of mergers in 1965. 31/

During 1959-64, the third through the tenth largest chains merger activity accounted for 38 percent of all acquired establishments and 41 percent of sales. Each of these 8 firms made at least 1 major acquisition during the period. The 11th through the 50th largest grocery chains also participated heavily in merger activity, acquiring 42 percent of all establishments acquired. All other companies, including the 2 largest chains, accounted for only a fifth of all establishments acquired.

A recent Federal Trade Commission ruling restrains one of the major chains from acquiring any grocery stores without prior FTC consent. This ruling, if applied to other chains, may cause marked reduction in merger activity. A similar, though less sweeping, restraint was placed on another large chain last June.

Specialized Stores

Food stores other than grocery stores include meat and seafood markets, fruit stores, vegetable markets, candy, nut and confectionery stores, dairy product stores, retail bakeries, and miscellaneous food stores. Their number amounted to one-fourth of the total number of stores classified as retail food stores in the 1963 Census of Business (table 14). Between 1948 and 1963, their number decreased slightly more slowly than did the number of grocery stores. However, their sales increased much more slowly than sales of grocery stores. Between 1958 and 1963 their sales declined.

Specialized stores are mostly small and independently operated. Their average size was much smaller than that of the average single-unit grocery store in 1963. In 1948, the 2 were about the same size. This pattern of slow growth contrasts sharply

28/ Supermarket Industry Speaks, 1965, (Super Market Institute, Inc., Chicago, Illinois, 1965).

29/ Mergers and Acquisitions by Retail Grocery Companies, 1959-64, Marketing and Transportation Situation Reprint, ERS-253, Aug. 1965. The report, based on secondary sources, excluded acquisitions by companies not primarily engaged in the retail grocery store trade.

30/ See Federal Trade Commission, Economic Inquiry Into Food Marketing, Part I, 1960, p. 128. The FTC and USDA studies are not strictly comparable due to differences in definitions of retail grocery store companies.

31/ Progressive Grocer, April 1966, p. 9.

with the rise in consumers' total food expenditures and the even more rapid rise in sales of grocery stores. Market share of specialized stores has been lost to grocery stores and especially to supermarkets, which sell many specialty items for a lower margin than the small specialized food stores.

Future Prospects in Food Store Retailing

Supermarkets will continue to increase both in number and in sales. They provide a wide and ever increasing assortment of products at competitive prices. Their growth has paralleled increases and shifts in population. New store openings will follow developments of new residential areas and increases in sales potential of developed areas.

The size of new supermarkets has remained fairly constant in recent years, indicating that an optimum size may have been reached. However, a recent poll of supermarket executives suggests that the industry now favors a larger selling area. This increase in preferred size may be due to competition from discount house food departments as well as the proliferation of new grocery products. Because of this increase in size and the ever increasing importance of the supermarket, the average sales per grocery store will continue to rise.

Single units will continue to decline in number, and any further decrease in market share will continue to be primarily among those retailers not affiliated with a wholesaler. Stores of less than supermarket size will continue to decline in importance except in areas where the population density and other characteristics will not support a supermarket.

Affiliation with a wholesaler has allowed many small retail firms operating single- and multi-unit establishments to compete effectively with chains. The affiliated wholesaler supplies a wide range of goods at prices low enough to meet chain competition. In addition, the affiliated retailer has greater discretion than most chain store managers in pricing and displaying products. Finally, Government restraints (1) force the very large chains to limit their share of any given geographical market and (2) curb discriminatory pricing by manufacturers in favor of the large chains.

The above factors all appear destined to continue into the future, leaving the affiliated retailers in a competitive position with the larger chains. However, the very large chains appear to have more ability to establish stores in new population centers. Often promoters of shopping centers want nationally known chains in preference to independents. Also, chains have the financial ability to buy new sites somewhat before population actually begins to boom.

Eating Places

Eating places have gained an increasing portion of the consumer's food dollar in recent years. Between 1958 and 1963, sales by eating places increased 26 percent, compared with 20 percent for grocery stores and 16 percent for all retail food stores (tables 14 and 18). In this period, however, sales by eating places in constant dollars lagged behind those of grocery stores. ^{32/} Between 1963 and 1965, sales by eating places grew more than 50 percent faster than sales by grocery stores and constant dollar sales by eating places also grew faster than those of grocery stores. ^{33/}

^{32/} The index of retail prices of away-from-home consumed foods rose 13 percent between 1958 and 1963 compared with a 1 percent increase for home consumed food.

^{33/} Bureau of the Census, Monthly Retail Trade Report, January 1966 and Annual Trade Report, 1964.

Table 18.--Eating places: Number, total sales, and sales per establishment, by number of units, 1963, 1958, 1954, and 1948 1/

Number of units	Establishments			
	1963	1958	1954	1948 <u>2/</u>
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Single units	203,369	211,904	181,343	183,711
2 or 3 units	8,877	7,844	6,534	4,588
4 to 10 units	3,135	2,518	1,886	1,836
11 or more units ..	8,496	7,549	5,365	3,988
Total	223,877	229,815	195,128	179,185
	Sales			
	<u>Mil. dol.</u>	<u>Mil. dol.</u>	<u>Mil. dol.</u>	<u>Mil. dol.</u>
Single units	11,184	9,135	7,278	5,408
2 or 3 units	807	639	484	342
4 to 10 units	398	297	224	202
11 or more units ..	1,531	966	745	516
Total	13,919	11,038	8,731	6,441
	Sales per establishment			
	<u>1,000 dol.</u>	<u>1,000 dol.</u>	<u>1,000 dol.</u>	<u>1,000 dol.</u>
Single units	55	43	40	29
2 or 3 units	91	81	74	75
4 to 10 units	127	118	119	110
11 or more units ..	180	128	139	129
Average per establishment	62	48	45	36

1/ Definitions of eating places have changed with each census. The effect of most of these definitional changes is not available.

2/ However, the 1948 Census included eating places with no paid employees, between \$500 and \$2,500 in annual sales. Later censuses excluded such establishments. Totals for 1948 have been made comparable to earlier years, but subtotals have not. Hence, for 1948 subtotals do not add to the totals.

Compiled from Census of Business--Retail Trade, 1963, 1958, 1954, and 1948.

The increasing prominence of eating places in food marketing has been accompanied by an increase in the importance of eating places doing \$300,000 or more in annual sales and a decline in the importance of very small eating places. Establishments with \$300,000 annual sales made 28 percent of all eating place sales in 1963, up from 17 percent in 1948. Between 1958 and 1963, the number of establishments with less than \$50,000 annual sales declined.

The away-from-home eating industry is dominated by single-unit firms. Single units have accounted for over four-fifths of total eating place sales since 1948 (table 18). However, between 1958 and 1963, multi-unit firms with 11 or more establishments captured a modest portion of the single units' business. This trend apparently continued in 1963-65, when sales increased by eating and drinking places operated by firms with 11 or more units far exceeded sales increases by all eating places. 33/

After rising steadily from 1948 to 1958, the number of eating places had declined slightly by 1963. The 1958-63 period also saw an increase in constant dollar sales per eating place following a period of stable or declining constant dollar sales.

The rise in dollar sales of eating places has been caused by increased prices, growing population, and rising consumer purchasing power. In addition, eating places are well suited to continue taking advantage of important related changes in American habits. Two of the most important changes are increased mobility and more vacations. Other changes are (1) the rise in the number of working wives who have less time to prepare meals at home, (2) the rise in the number of older people less able to cook at home, less likely to save and more likely to desire to finally "enjoy themselves," (3) the increase in college students often without facilities, inclination or time to cook for themselves, and (4) the increase in the number of teenagers who frequent snack shops and hamburger stands. All of the factors appear destined to continue into the future and the outlook for eating places, especially those catering to the changing habits of Americans, is bright.

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. Washington, D.C. 20250. Ask for ERS-295. .
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Table 19.--Farm food products: Retail cost, farm value of equivalent quantities sold by producers, byproduct allowance, farm-retail spread, and farmer's share of retail cost, January-March 1966

Product 1/	Farm equivalent	Retail unit	Retail cost	Gross farm value	Byproduct allowance	Net farm value 2/	Farm-retail spread	Farmer's share
			Dollars	Dollars	Dollars	Dollars	Dollars	Percent
Market basket			1,090.50	---	---	451.38	639.12	41
Meat products			338.92	---	---	194.26	144.66	57
Dairy products			182.52	---	---	84.74	97.78	46
Poultry and eggs		Average quantities purchased per urban wage-earner and clerical-worker household in 1960-61	94.23	---	---	56.88	37.35	60
Bakery and cereal products 3/	Farm produce equivalent to products bought per urban wage-earner and clerical-worker household in 1960-61		163.41	---	---	34.39	129.02	21
All ingredients			---	32.11	5.51	26.60	---	16
Grain			226.39	---	---	60.64	165.75	27
All fruits and vegetables			108.62	---	---	35.99	72.63	33
Fresh fruits and vegetables			39.67	---	---	11.87	27.80	30
Fresh fruits			68.95	---	---	24.12	44.83	35
Fresh vegetables			---	---	---	---	---	---
Processed fruits and vegetables			117.77	---	---	24.65	93.12	21
Fats and oils			37.96	---	---	11.84	26.12	31
Miscellaneous products			47.07	---	---	8.63	38.44	18
			Cents	Cents	Cents	Cents	Cents	Percent
Beef, Choice grade	2.25 lb. Choice grade cattle	Pound	84.6	57.5	6.0	51.5	33.1	61
Lamb, Choice grade	2.35 lb. lamb	Pound	85.7	61.2	10.2	51.0	34.7	60
Pork	2.00 lb. hogs	Pound	78.1	53.3	7.1	46.2	31.9	59
Butter	Cream and whole milk	Pound	77.8	---	---	57.1	20.7	73
Cheese, American process	Milk for American cheese	$\frac{1}{2}$ pound	39.6	---	---	17.6	22.0	44
Ice cream	Cream, milk, and sugar	$\frac{1}{2}$ gallon	78.2	---	---	27.2	51.0	35
Milk, evaporated	Milk for evaporating	$14\frac{1}{2}$ -ounce can	15.3	---	---	7.2	8.1	47
Milk, fresh								
Home delivered	4.39 lb. Class I milk	$\frac{1}{2}$ gallon	53.6	---	---	22.8	30.8	43
Sold in stores	4.39 lb. Class I milk	$\frac{1}{2}$ gallon	48.0	---	---	22.8	25.2	48
Chickens, frying, ready-to-cook	1.37 lb. broiler	Pound	41.8	---	---	22.8	19.0	55
Eggs, Grade A large	1.03 dozen	Dozen	60.9	---	---	40.0	20.9	66
Bread, white								
All ingredients	Wheat and other ingredients	Pound	21.5	---	---	3.5	18.0	16
Wheat .....	.877 lb. wheat	Pound	---	3.2	.4	2.8	---	13
Bread, whole or cracked wheat .....	.708 lb. wheat	Pound	27.8	---	---	3.2	24.6	12
Cookies, sandwich .....	.528 lb. wheat	Pound	50.5	---	---	4.3	46.2	9
Corn flakes	2.87 lb. yellow corn	12 ounces	29.0	$\frac{1}{4}/6.0$	$\frac{1}{4}/3.5$	$\frac{1}{4}/2.5$	26.5	9
Flour, white	6.8 lb. wheat	5 pounds	58.2	24.7	3.0	21.7	36.5	37
Apples	1.04 lb. apples	Pound	17.0	---	---	5.8	11.2	34
Grapefruit	1.03 grapefruit	Each	12.9	---	---	2.7	10.2	21
Lemons	1.04 lb. lemons	Pound	23.7	---	---	5.8	17.9	24
Oranges	1.03 doz. oranges	Dozen	72.1	---	---	15.4	56.7	21
Cabbage	1.08 lb. cabbage	Pound	12.5	---	---	4.0	8.5	32
Carrots	1.03 lb. carrots	Pound	16.4	---	---	5.4	11.0	33
Celery	1.08 lb. celery	Pound	17.5	---	---	5.9	11.6	34
Cucumbers	1.09 lb. cucumbers	Pound	29.9	---	---	11.0	18.9	37
Lettuce	1.88 lb. lettuce	Head	31.1	---	---	13.8	17.3	44
Onions	1.06 lb. onions	Pound	10.2	---	---	2.5	7.7	25
Peppers, green	1.09 lb. peppers	Pound	41.0	---	---	15.4	25.6	38
Potatoes	10.42 lb. potatoes	10 pounds	68.1	---	---	21.6	46.5	32
Spinach .....	.71 lb. spinach	10 ounces	29.2	---	---	7.3	21.9	25
Tomatoes	1.18 lb. tomatoes	Pound	35.8	---	---	12.8	23.0	36
Peaches, canned	1.60 lb. Calif. cling peaches	No. 2 $\frac{1}{2}$ can	34.2	---	---	5.4	28.8	16
Pears, canned	1.85 lb. pears for canning	No. 2 $\frac{1}{2}$ can	51.6	---	---	12.0	39.6	23
Beets, canned	1.24 lb. beets for canning	No. 303 can	17.0	---	---	1.1	15.9	6
Corn, canned	2.495 lb. sweet corn	No. 303 can	21.4	---	---	2.7	18.7	13
Peas, canned .....	.69 lb. peas for canning	No. 303 can	24.1	---	---	3.4	20.7	14
Tomatoes, canned	1.84 lb. tomatoes for canning	No. 303 can	17.1	---	---	3.4	13.7	20
Orange juice, concentrate, frozen ..	2.58 lb. oranges	6-ounce can	21.3	---	---	9.7	11.6	46
French fried potatoes, frozen	1.38 lb. potatoes	9 ounces	15.8	---	---	2.3	13.5	15
Peas, frozen .....	.70 lb. peas for freezing	10 ounces	19.9	---	---	3.5	16.4	18
Beans, navy	1.00 lb. Mich. dry beans	Pound	19.9	---	---	8.7	11.2	44
Margarine	Soybeans, cottonseed, and milk	Pound	28.1	---	---	8.7	19.4	31
Peanut butter	1.33 lb. peanuts	12-ounce jar	45.0	---	---	15.6	29.4	35
Salad and cooking oil	Soybeans, cottonseed, and corn	Pint	36.2	---	---	9.5	26.7	26
Vegetable shortening	Soybeans and cottonseed	3 pounds	88.2	---	---	30.5	57.7	35
Sugar	Sugar beets and cane	5 pounds	59.5	22.6	1.4	5/21.2	5/38.3	5/36
Spaghetti with sauce, canned	Wheat, tomatoes, cheese, sugar	15 $\frac{1}{2}$ -ounce can	15.6	---	---	2.1	13.5	13

1/ Product groups include more items than those listed in this table. For example, in addition to the products listed--Choice beef, lamb, and pork (major products except lard)--the meat products group includes lower grades of beef, the minor edible pork products, and veal.

2/ Gross farm value adjusted to exclude imputed values of byproducts obtained in processing.

3/ For the bakery and cereal products group and the individual wheat products, gross farm value, by product allowance, net farm value, and farmer's share are based on the market price of wheat received by farmers plus 75 cents per bushel, the cost of the marketing certificate to millers and the value of the domestic marketing certificate received by farmers complying fully with the Wheat Program.

4/ Based on market price of corn received by farmers; no allowance made for price support payment received by farmers who comply with the Federal Feed Grain Program.

5/ Net farm value adjusted for Government payments to producers was 25.1 cents, farm-retail spread adjusted for Government processor tax was 35.6 cents, and farmer's share of retail cost based on adjusted farm value was 42 percent.

Table 20.--Farm food products: Retail cost and farm value, January-March 1966, October-December 1965, January-March 1965, and 1957-59 average

Product 1/	Retail unit	Retail cost						Net farm value 2/					
		January-March 1966	October-December 1965	January-March 1965	1957-59 average	Percentage change from-		January-March 1966	October-December 1965	January-March 1965	1957-59 average	Percentage change from-	
						Jan.-Mar. 1966	Oct.-Dec. 1965					Jan.-Mar. 1966	Oct.-Dec. 1965
		Dollars	Dollars	Dollars	Dollars	Percent	Percent	Dollars	Dollars	Dollars	Dollars	Percent	Percent
Market basket		1,090.50	1,051.54 ^{3/}	1,014.65	982.65	4	7	451.38	3/423.75	383.98	387.87	7	13
Meat products		338.92	318.87	3/282.32	285.05	6	20	194.26	3/178.31	139.99	154.47	9	39
Dairy products		182.52	179.98	3/179.45	173.33	1	2	84.74	3/82.34	79.49	77.85	3	7
Poultry and eggs		94.23	89.72	81.80	93.02	5	15	56.88	52.70	45.63	56.28	8	25
Bakery and cereal products 4/													
All ingredients	Average quantities purchased per urban wage-earner and	163.41	161.01	161.01	148.40	1	1	34.39	33.37	33.17	30.55	3	4
Grain	clerical-	---	---	---	---	---	---	26.60	26.18	25.69	23.40	2	4
All fruits and vegetables	worker	226.39	218.07	226.80	202.96	4	5/	60.64	3/57.77	64.64	50.05	5	-6
Fresh fruits and vegetables ..	household	108.62	102.28	109.25	91.15	6	-1	35.99	3/31.39	37.14	28.70	15	-3
Fresh fruits	in	39.67	40.26	39.47	36.26	-1	1	11.87	11.93	12.38	12.26	-1	-4
Fresh vegetables	1960-61	68.95	62.02	69.78	54.89	-1	-1	24.12	3/19.46	24.76	16.44	24	-3
Processed fruits and vegetables		117.77	115.79	117.55	111.81	2	5/	24.65	3/26.38	27.50	21.35	-7	-10
Fats and oils		37.96	37.50	37.08	37.56	1	2	11.84	10.71	12.73	11.19	11	-7
Miscellaneous products		47.07	46.39	46.19	42.33	1	2	8.63	8.55	8.33	7.48	1	4
		Cents	Cents	Cents	Cents	Percent	Percent	Cents	Cents	Cents	Cents	Percent	Percent
Beef, Choice grade	Pound	84.6	82.9	78.6	78.1	2	8	51.5	47.2	43.6	48.3	9	18
Lamb, Choice grade	Pound	85.7	80.4	3/75.6	70.0	7	13	51.0	45.6	42.1	40.2	12	21
Pork	Pound	78.1	70.7	56.8	60.5	10	38	46.2	43.5	28.3	31.0	6	63
Butter	Pound	77.8	76.6	75.1	73.2	2	4	57.1	3/56.1	53.5	52.6	2	7
Cheese, American process	gallon	39.6	37.9	37.5	32.3	4	6	17.6	16.0	15.4	14.2	10	14
Ice cream	14 1/2-ounce can	78.2	78.0	79.5	84.2	5/	-2	27.2	3/25.7	24.8	23.4	6	10
Milk, evaporated		15.3	15.2	15.2	14.5	1	1	7.2	6.7	6.6	6.2	7	9
Milk, fresh													
Home delivered	gallon	53.6	53.1	52.8	50.8	1	2	22.8	22.6	21.9	21.9	1	4
Sold in stores	gallon	48.0	47.6	47.5	46.6	1	1	22.8	22.6	21.9	21.9	1	4
Chickens, frying, ready-to-cook ..	Pound	41.8	38.5	38.3	43.5	9	9	22.8	20.0	20.6	24.4	14	11
Eggs, Grade A large	Dozen	60.9	59.8	49.4	56.2	2	23	40.0	39.2	28.5	36.1	2	40
Bread, white													
All ingredients	Pound	21.5	20.9	21.0	18.5	3	2	3.5	3.4	3.3	3.0	3	6
Wheat	Pound	---	---	---	---	---	---	2.8	2.7	2.7	2.4	4	4
Bread, whole or cracked wheat ..	Pound	27.8	27.2	26.7	---	2	4	3.2	3.1	3.0	---	3	7
Cookies, sandwich	Pound	50.5	50.4	50.9	---	2/	-1	4.3	4.2	4.4	---	2	-2
Corn flakes	12 ounces	29.0	28.8	29.0	24.5	1	0	2.5	2.3	2.6	2.4	9	-4
Flour, white	5 pounds	58.2	57.9	58.1	53.3	1	5/	21.7	21.5	20.7	18.8	1	5
Apples	Pound	17.0	15.5	16.3	16.1	10	4	5.8	5.3	5.5	4.7	9	5
Grapefruit	Each	12.9	13.5	12.5	10.7	-4	3	2.7	2.6	2.4	2.7	4	12
Lemons	Pound	23.7	22.9	24.6	18.4	3	-4	5.8	5.9	7.1	4.2	-2	-18
Oranges	Dozen	72.1	81.0	75.4	66.0	-11	-4	15.4	18.6	21.2	23.2	-17	-27
Cabbage	Pound	12.5	8.8	10.7	8.7	42	17	4.0	2.4	2.9	2.4	67	38
Carrots	Pound	16.4	14.9	14.6	14.5	10	12	5.4	4.6	3.7	3.7	17	46
Celery	Pound	17.5	15.7	15.7	15.3	11	11	5.9	5.1	4.7	4.4	16	26
Cucumbers	Pound	29.9	19.0	25.3	---	57	18	11.0	6.0	9.3	---	83	18
Lettuce	Head	31.1	26.7	23.1	22.6	16	35	13.8	8.8	6.3	6.0	57	119
Onions	Pound	10.2	10.4	11.0	10.1	-2	-7	2.5	2.3	2.8	3.4	9	-11
Peppers, green	Pound	41.0	30.4	31.3	---	35	31	15.4	12.5	10.4	---	23	48
Potatoes	10 pounds	68.1	67.2	96.3	58.3	1	-29	21.6	3/19.6	44.9	17.8	10	-52
Spinach	10 ounces	29.2	29.4	28.5	---	-1	2	7.3	6.3	5.6	---	16	30
Tomatoes	Pound	35.8	35.4	33.8	30.1	1	6	12.8	13.3	10.5	10.6	-4	22
Peaches, canned	No. 2 1/2 can	34.2	31.6	31.8	34.3	8	8	5.4	5.4	4.9	6.1	0	10
Pears, canned	No. 2 1/2 can	51.6	50.6	45.6	---	2	13	12.0	12.0	8.1	---	0	48
Beets, canned	No. 303 can	17.0	16.7	16.4	---	2	4	1.1	1.1	1.2	---	0	-8
Corn, canned	No. 303 can	21.4	20.3	19.6	17.8	5	9	2.7	2.7	2.5	2.4	0	8
Peas, canned	No. 303 can	24.1	24.0	23.0	21.0	5/	5	3.4	3.4	3.3	3.1	0	3
Tomatoes, canned	No. 303 can	17.1	16.5	16.0	15.6	4	7	3.4	3.4	2.8	2.3	0	21
Orange juice, concentrate, frozen	6-ounce can	21.3	21.6	27.4	23.4	-1	-22	9.7	9.7	13.2	8.2	0	-27
French fried potatoes, frozen ..	9 ounces	15.8	16.3	16.9	---	-3	-7	2.3	3/3.8	4.3	---	-39	-47
Peas, frozen	10 ounces	19.9	20.0	20.6	19.9	5/	-3	3.5	3.5	3.5	3.2	0	0
Beans, navy	Pound	19.9	18.6	17.2	16.3	7	16	8.7	8.6	6.9	6.9	1	26
Margarine	Pound	28.1	27.8	27.7	27.4	1	1	8.7	7.7	9.6	7.8	13	-9
Peanut butter	12-ounce jar	45.0	44.9	44.7	41.4	5/	1	15.6	15.2	15.6	14.1	3	0
Salad and cooking oil	Pint	36.2	35.5	33.8	---	2	7	9.5	8.5	10.1	---	12	-6
Vegetable shortening	3 pounds	88.2	87.1	87.5	90.4	1	1	30.5	27.5	33.4	28.2	11	-9
Sugar	5 pounds	59.5	59.1	58.9	54.5	1	1	21.2	21.1	21.1	20.2	5/	5/
Spaghetti with sauce, canned	15 1/2-ounce can	15.6	15.2	15.1	---	3	3	2.1	2.0	1.9	---	5	11

1/ Product groups include more items than those listed in this table. For example, in addition to the products listed--Choice beef, lamb, and pork (major products except lard)--the meat products group includes lower grades of beef, the minor edible pork products, and veal.

2/ Gross farm value adjusted to exclude imputed value of byproducts obtained in processing.

3/ Most retail cost figures for October-December 1965, and farm value figures for January-March 1965 have been revised; figures in other columns revised as indicated.

4/ For the bakery products group and the individual wheat products, the net farm value for July 1964 to date is based on the market price of wheat received by farmers plus the cost of the marketing certificate to processors. This cost equals the value of the domestic marketing certificates received by farmers complying fully with the Wheat Program.

5/ Less than 0.5 percent.

Table 21.--Farm food products: Farm-retail spread and farmer's share of the retail cost, January-March 1966
October-December 1965, January-March 1965, and 1957-59 average

Product 1/	Retail unit	Farm-retail spread 2/						Farmer's share			
		January- March 1966	October- December- 1965 3/	January- March 1965 3/	1957-59 average	Percentage change from Jan-Mar. 1966		January- March 1966	October- December- 1965	January- March 1965	1957-59 average
						Oct.- Dec. 1965	Jan.- Mar. 1965				
		Dollars	Dollars	Dollars	Dollars	Percent	Percent	Percent	Percent	Percent	Percent
Market basket		639.12	627.79	630.67	594.78	2	1	41	40	38	39
Meat products		144.66	140.56	142.33	130.58	3	2	57	56	50	54
Dairy products	Average quantities purchased per urban wage-earner and	97.78	97.64	99.96	95.48	4/	-2	46	46	44	45
Poultry and eggs		37.35	37.02	36.17	36.74	1	3	60	59	56	61
Bakery and cereal products 5/											
All ingredients		129.02	127.64	127.84	117.85	1	1	21	21	21	21
Grain	clerkical-	---	---	---	---	---	---	16	16	16	16
All fruits and vegetables	worker	165.75	160.30	162.16	152.91	3	2	27	26	3/29	25
Fresh fruits and vegetables ..	household	72.63	70.89	72.11	62.45	2	1	33	31	34	31
Fresh fruits	in	27.80	28.33	27.09	24.00	-2	3	30	30	3/31	34
Fresh vegetables	1960-61	44.83	42.56	45.02	38.45	5	4/	35	31	35	30
Processed fruits and vegetables		93.12	89.41	90.05	90.46	4	3	21	23	23	19
Fats and oils		26.12	26.79	24.35	26.37	-3	7	31	29	34	30
Miscellaneous products		38.44	37.84	37.86	34.85	2	2	18	18	18	18
		Cents	Cents	Cents	Cents	Percent	Percent	Percent	Percent	Percent	Percent
Beef, Choice grade	Pound	33.1	35.7	35.0	29.8	-7	-5	61	57	55	62
Lamb, Choice grade	Pound	34.7	34.8	33.5	29.8	4/	4	60	3/57	56	57
Pork	Pound	31.9	27.2	28.5	29.5	17	12	59	62	50	51
Butter	Pound	20.7	20.5	21.6	20.6	1	-4	73	73	71	72
Cheese, American process	14-ounce can	22.0	21.9	22.1	18.1	4/	4/	44	42	41	44
Ice cream	gallon	51.0	52.3	54.7	60.8	-2	-7	35	33	31	28
Milk, evaporated	14-ounce can	8.1	8.5	8.6	8.3	-5	-6	47	44	43	43
Milk, fresh											
Home delivered	gallon	30.8	30.5	30.9	28.9	1	4/	43	43	41	43
Sold in stores	gallon	25.2	25.0	25.6	24.7	1	-2	48	47	46	47
Chickens, frying, ready-to-cook ..	Pound	19.0	18.5	17.7	19.1	3	7	55	52	54	56
Eggs, Grade A large	Dozen	20.9	20.6	20.9	20.1	1	0	66	66	58	64
Bread, white											
All ingredients	Pound	18.0	17.5	17.7	15.5	3	2	16	16	16	16
Wheat	Pound	---	---	---	16.1	---	---	13	13	13	13
Bread, whole or cracked wheat ..	Pound	24.6	24.1	23.7	---	2	4	12	11	11	---
Cookies, sandwich	Pound	46.2	46.2	46.5	---	0	-1	8	8	9	---
Corn flakes	12 ounces	26.5	26.5	26.4	22.1	0	4/	9	8	9	10
Flour, white	5 pounds	36.5	36.5	37.4	34.5	4/	-2	37	37	36	35
Apples	Pound	11.2	10.2	10.8	11.4	10	4	34	34	34	29
Grapefruit	Each	10.2	10.9	10.1	8.0	-6	1	21	19	19	25
Lemons	Pound	17.9	17.0	17.5	14.2	5	2	24	26	29	23
Oranges	Dozen	56.7	62.4	54.2	42.8	-9	5	21	23	28	35
Cabbage	Pound	8.5	6.4	7.8	6.3	33	9	32	27	27	28
Carrots	Pound	11.0	10.3	10.9	10.8	7	1	33	31	25	26
Celery	Pound	11.6	10.6	11.0	10.9	9	5	34	32	30	29
Cucumbers	Pound	18.9	13.0	16.0	---	45	18	37	32	37	---
Lettuce	Head	17.3	17.9	16.8	16.6	-3	3	44	33	27	27
Onions	Pound	7.7	8.1	8.2	6.7	-5	-6	25	22	25	34
Peppers, green	Pound	25.6	17.9	20.9	---	43	22	38	3/41	33	---
Potatoes	10 pounds	46.5	47.6	51.4	40.5	-2	-10	32	29	3/47	31
Spinach	10 ounces	21.9	23.1	22.9	---	-5	-4	25	3/21	20	---
Tomatoes	Pound	23.0	22.1	23.3	19.5	4	-1	36	3/38	31	35
Peaches, canned	No. 2 1/2 can	28.8	26.2	26.9	28.2	10	7	16	17	3/15	18
Pears, canned	No. 2 1/2 can	39.6	38.6	37.5	---	3	6	23	24	18	---
Beets, canned	No. 303 can	15.9	15.6	15.2	---	2	5	6	7	7	---
Corn, canned	No. 303 can	18.7	17.6	17.1	15.4	6	9	13	13	13	13
Peas, canned	No. 303 can	20.7	20.6	19.7	17.9	4/	5	14	14	14	15
Tomatoes, canned	No. 303 can	13.7	13.1	13.2	13.3	5	4	20	21	18	15
Orange juice, concentrate, frozen	6-ounce can	11.6	11.9	14.2	15.2	-3	-18	46	45	48	35
French fried potatoes, frozen ..	9 ounces	13.5	12.5	12.6	---	8	7	15	3/23	2/25	---
Peas, frozen	10 ounces	16.4	16.5	17.1	16.7	-1	-4	18	18	17	16
Beans, navy	Pound	11.2	10.0	10.3	9.4	12	9	44	46	40	42
Margarine	Pound	19.4	20.1	18.1	19.6	-3	7	31	28	35	28
Peanut butter	12-ounce jar	29.4	29.7	29.1	27.3	-1	1	35	34	35	34
Salad and cooking oil	Pint	26.7	27.0	23.7	---	-1	13	26	24	30	---
Vegetable shortening	3 pounds	57.7	59.6	54.1	62.2	-3	7	35	32	38	31
Sugar	5 pounds	38.3	38.0	37.8	34.3	1	1	36	36	36	37
Spaghetti with sauce, canned ..	15 1/2-ounce can	13.5	13.2	13.2	---	2	2	13	13	13	---

1/ Product groups include more items than those listed in this table. For example, in addition to the products listed--Choice beef, lamb, and pork (major products except lard)--the meat products group includes lower grades of beef, the minor edible pork products, and veal.

2/ The farm-retail spread is the difference between the retail cost and the net farm value shown in table on opposite page.

3/ Most farm-retail spread figures for October-December 1965, and January-March 1965 have been revised; figures in other columns revised as indicated.

4/ Less than 0.5 percent.

5/ For the bakery products group and the individual wheat products, the farmer's share for July 1964 to date is based on the market price of wheat received by farmers plus the cost of the marketing certificate to processors. This cost equals the value of the domestic marketing certificate received by farmers complying fully with the Wheat Program.

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